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CIVIL DEFENSE AND THE PUBLIC

An Overview of Public Attitudes Studies

RESEARCH REPORT NO. 17

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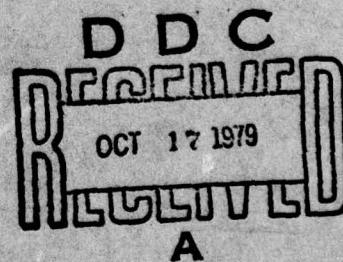
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An Overview of Public Attitude Studies

RESEARCH REPORT NO. 17
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This report outlines relevant aspects of civil defense history and provides a general overview of public attitudes during the past 25 years. Public attitude findings are summarized under such topics as the international context, threat perception, general favorability, program support salience, perceptions of local programs, perceptions of shelters as a survival resource, response to warning, and training and education impact. Findings are reviewed relevant to such special audiences as information seekers, youth, local governing

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bodies, volunteers and voluntary associations, and the community power structure. The credibility and accpetance of crisis relocation programs, home basement sharing, and blast shelter programs are discussed. The implications of the findings and their bearing on program development are reviewed.

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PREFACE

In the review and evaluation of research reports and findings, we occasionally have requests to share selected studies with the civil defense operating staffs at the State and local levels. Recently, we were requested to summarize the results of studies of public attitudes, levels of knowledge, and response for a wider audience than we feel it useful to provide the research reports. The author has been making periodic presentations at the DCPA Staff College Career Development Program and this summary was undertaken so that participants might have the material for future use.

The reports used in this paper are indicated in the footnotes. It is not the plan for DCPA to reproduce and distribute these reports. Each of the reports have been approved for public release and sale, and may be purchased from the National Technical Information Service, Springfield, Virginia 22151.

The various surveys being reported were undertaken for specific research purposes in which the measurement of public attitudes were only incidental to the central objectives. The statements reported in this analysis represent only a few paragraphs from lengthy reports. In general, the national surveys completed by the University of Pittsburgh provide the best general overview of the state of public attitudes, levels of knowledge, and behavior. Since some of the studies have attempted to explain in some detail the underlying meanings inherent in the studies, they may be more detailed and technical than the reader might wish to study.

A number of individuals and research efforts have made this summary possible. These include Dr. Jiri Nehnevajsa, Urban Research Center, University of Pittsburg; Dr. John Christiansen, Department of Sociology and Social Work, Brigham Young University; Dr. Vincent Farace, Department of Communication, Michigan State University; Dr, Gerald Klonglan, Department of Sociology and Anthropology, Iowa State University; and Mr. William Chenault, Human Sciences Research, Inc. Parts of the summary have been taken from various other DCPA-sponsored research efforts.

This summary overview is drawn from research reports which have been reviewed by the Defense Civil Preparedness Agency and approved for public distribution. This approval does not signify that the contents of the reports necessarily reflect the views and policies of the Defense Civil Preparedness Agency. The views and opinions reported in this summary are those of the author and, likewise, do not represent the Defense Civil Preparedness Agency.

CIVIL DEFENSE AND THE PUBLIC

An Overview of Public Attitude Studies

The objective of this paper is to develop a general framework for thinking and discussing civil preparedness programs and their various implementing audiences; review briefly the historical development of tne present national civil preparedness program; summarize selected findings about public attitudes, levels of knowledge and response to civil preparedness measures; and assess their likely meanings for civil preparedness programs in the decade of the eighties.

Some 28 years ago, after several years of discussion in government and with the passage of the Civil Defense Act, the United States undertook the development of programs designed to protect life and property by preparing the United States population for carrying out non-military defense functions designed to minimize, repair, and recover from injury and damage resulting from attack. The measure of worth and effectiveness of civil defense programs is their contribution to lifesaving and recovery potential.

In achieving the mission, a wide range of system choices are possible, each having cost effectiveness rations which must be evaluated on a continuing basis. A part of this evaluation is an assessment of the constraints imposed on systems feasibility by social and psychological factors. These constraints are major determinants of effectiveness not only during the operational phase of the program but, probably more important, they limit ability to develop a system for operations.

During the operational phase, the American people would use the emergency systems developed to save lives and recover from attack. For this overriding reason, a major factor in assessing effectiveness is the level of public cooperation in using the countermeasure systems under conditions of nuclear war. A more "here and now" dimension of these same factors is the requirement that elements of the public must become active agents in the development of emergency systems, in the maintenance of their continued readiness, and for their proper functioning in the environment for which the systems were designed.

Programs can be designed which require varying levels of cooperation, particularly during their development phase. However, ultimately people must accept, be knowledgeable about, and use the programs to save their own lives. This is such an obvious requirement that assessments of human behavior factors have been made at all levels of civil preparedness, and influence program choices and levels of implementation. In fact, the history of the civil defense program can be viewed as a series of changes and re-directions resulting not only from changes in size of nuclear arsenals, weapons effects, and possible levels of damage, but from reassessments of the likely social and psychological feasibility factors. Greater energy nas been applied to more limited objectives, and some aspects of the program have been deferred to crisis periods when target audiences are expected to be more receptive.

History

A brief summary of some of the past civil defense history is needed to set a framework for discussion of public attitudes. In many ways, the history of civil defense funding reflects changes in the public's perception of the urgency of the civil defense program. (Figure I.) The small peak in funding in 1957 followed a period of Soviet weapons testing. During this period the then Federal Civil Defense Administration proposed a large scale shelter program. This program was not submitted to Congress for funding. The big peak in funding occurred at the Berlin crisis; funding then declined to the 1950 levels. Also important is the history of Congressional action on Civil Defense budget requests (Figure II.) Note that during the first three years, appropriations were only 10 percent of the President's budget request. During this period, Defense appropriations increased steadily and the concept of massive retaliation was the primary national defense strategy. Decisions regarding civil defense have been strongly influenced by strategic policy. During the 1950's, the dominance of U.S. offensive power coupled with a strategic policy of "massive retaliation," kept civil defense in a minor role. It is useful to review changes occurring in the civil defense program resulting in a changing strategic environment and a reassessment of the social, psychological, and political feasibility of implementing the protective measures needed.

The 1950's

The Federal Civil Defense Act of 1950 was enacted due to concern for civil defense on the part of both the public and State and local governments. This concern arose from the detonation in 1949 of the first Soviet nuclear device and the Korean War. The Act made operational civil defense the primary responsibility of the State and local governments, with the Federal government providing guidance and some matching-fund aid. Lack of suitable protection against fire and blast effects led to plans for rapid ("tactical") evacuation of cities during the several hours anticipated between warning that an attack had been launched and the arrival of enemy bombers. Such evacuation planning—as a low-cost substitute for expensive blast shelters— was recommended by the Project East River study in 1952 and was initiated several years later.[1]

The advent of thermonuclear weapons, with a nationwide threat of fallout, and the prospect of rapid delivery of these weapons by ICBM, led to a major change in concept. By 1956, there was a consensus that an "ultimate" civil defense posture must be based on blast-resistant shelters in major cities and fallout protection elsewhere; such a program was proposed by the Federal Civil Defense Administration (FCDA).

The problem of continental defense was studied the following year by the Gaither Panel.[2] The Panel's 1957 report, "Deterrence and Survival in the Nuclear Age," recommended a nationwide program for the construction of fallout shelters to be "tied into a broad pattern of organization for the emergency and its aftermath." Construction of blast shelters in cities was not recommended for the time being, although indepth research on blast protection was recommended. The Gaither report failed to result in a program for construction of fallout shelters, but two organizational changes did ensue. FCDA and the Office of Defense Mobilization were merged

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MILLIONS OF DOLLARS

CIVIL DEFENSE APPROPRIATIONS

CONSTANT VALUE DOLLARS NORMALIZED TO YEAR OF INITIAL FUNDING (1951)

APPROPRIATION

MILLIONS OF DOLLARS

SOVIET TESTS

SPUTNIK

BERLIN CRISIS

ACTUAL APPROPRIATIONS

CUBAN CRISIS

ADJUSTED VALUES

SOUTHEAST ASIA CONFLICT
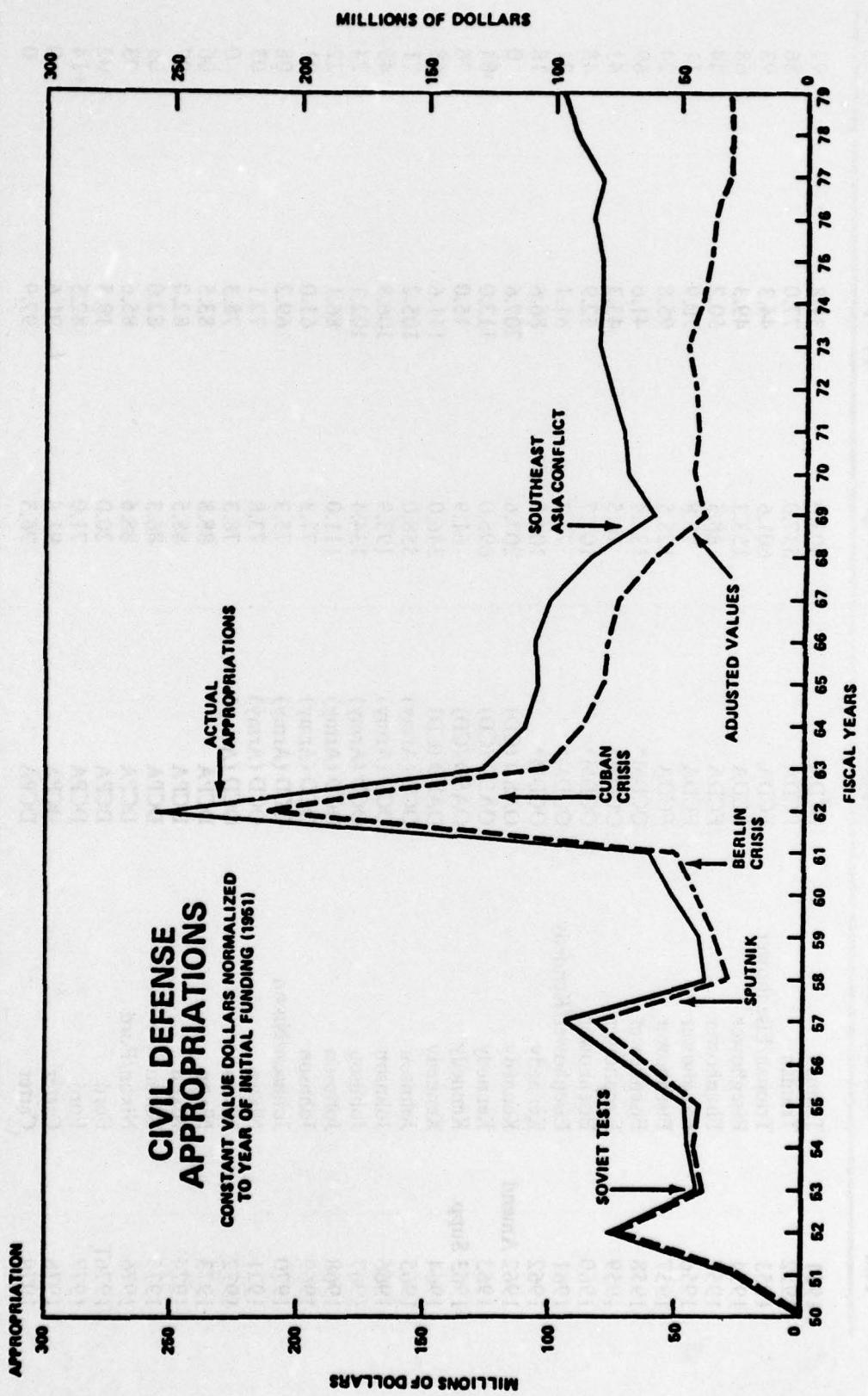
FISCAL YEARS

Figure 1

CONGRESSIONAL ACTION ON BUDGET REQUESTS

Fiscal Year	Preparing Administration	C.D. Organization	Budget	Appropriation	Percent Reduction
1951	Truman	FCDA	403.0	31.8	92
1952	Truman	FCDA	537.0	77.0	86
1953	Truman/Eisenhower	FCDA	601.6	44.3	93
1954	Eisenhower	FCDA	153.3	49.3	68
1955	Eisenhower	FCDA	88.5	50.2	44
1956	Eisenhower	FCDA	78.8	70.9	11
1957	Eisenhower	FCDA	125.5	95.8	24
1958	Eisenhower	OCDM*	132.4	41.6	69
1959	Eisenhower	OCDM*	76.5	45.3	41
1960	Eisenhower	OCDM*	101.7	52.9	48
1961	Eisenhower	OCDM*	77.3	61.1	21
1962	Eisenhower/Kennedy	OCDM*	104.5	86.6	18
1962 Amend	Kennedy	OASD (CD)	207.6	207.6	0
1963	Kennedy	OASD (CD)	695.0	113.0	84
1963 Supp	Kennedy	OASD (CD)	61.9	15.0	76
1964	Kennedy	OASD (CD)	346.0	111.6	68
1965	Johnson	OCD (Army)	358.0	105.2	71
1966	Johnson	OCD (Army)	193.9	106.8	45
1967	Johnson	OCD (Army)	134.4	102.1	24
1968	Johnson	OCD (Army)	111.0	86.1	22
1969	Johnson	OCD (Army)	77.3	61.0	21
1970	Johnson/Nixon	OCD (Army)	75.3	69.2	08
1971	Nixon	OCD (Army)	73.8	72.1	03
1972	Nixon	OCD (Army)	78.3	78.3	0
1973	Nixon	DCPA	88.8	83.5	06
1974	Nixon	DCPA	88.5	82.0	07
1975	Nixon	DCPA	86.3	82.0	05
1976	Nixon/Ford	DCPA	88.6	85.6	03
1976T	Ford	DCPA	20.0	19.5	02
1977	Ford	DCPA	71.0	82.5	+14
1978	Carter	DCPA	91.6	91.6	0
1979	Carter	DCPA	96.5	97.9	0

*Included OEP-Type Functions in Addition to Civil Defense

into a new agency: the Office of Civil and Defense Mobilization (OCDM), located in the Executive Office of the President. OCDM was responsible to administer 1950 legislation for relief following major peacetime disasters (as FCDA had done since 1953). Also, the Federal Civil Defense Act was amended in 1958 to make civil defense a joint responsibility of the Federal Government, and of the States and their political subdivisions. Matching-fund authority was broadened to include the salaries and expenses of State and local civil defense staffs.

Although Public Law 920 significantly limited the Federal role in civil defense to that of an advisory and coordinating service with the operational responsibility vested in the State and local governments, the Federal Civil Defense Administration nevertheless proposed ambitious programs including surveys to identify structures that would provide blast shelters and proposals for upgrading existing structures on a matching-fund basis. These proposals failed to gain Congressional support. Frustrated in its efforts to improve protection against blast and fire in target cities, civil defense turned to evacuation of cities as a low-cost survival alternative.

By 1955, civil defense concepts were reconsidered because of increasing stockpiles of large yield nuclear weapons and improved delivery systems. A review of civil defense by the Kefauver Committee resulted in the development of survival plans funded by the Federal Government. The plans provided for evacuation and fallout shelter in reception areas; however, the shrinking warning time, resulting from the development of improved delivery systems, argued against this policy and it became quite obvious that reliance on both blast and fallout shelters was the only viable base for the protection of the population. Since a replacement program of blast and fallout shelter was not available, the concept of evacuation persisted in planning and training for many years.

In 1956, the Holifield Committee held extensive hearings on civil defense. The final report called for a suspension of evacuation planning and the initiation of a Federally financed program of building blast and fallout shelters on the basis of risk. The Federal Civil Defense Administration proposed such a program to Congress. There were extensive discussions within the Administration and a number of studies completed inside and outside the government. These discussions did not result in a shelter building program, but did result in organizational changes. The first was a merger of the Office of Defense Mobilization and the Federal Civil Defense Administration into the Office of Civil and Defense Mobilization, and a change in the 1950 Act making civil defense a joint responsibility of Federal Government and the States and their political subdivisions.

The 1960's

Research during the latter 1950's disclosed the value, in terms of added survivors, of fallout protection provided by existing buildings. A practical and low-cost answer to at least part of the fallout problem appeared within reach. After considerable discussion, a phased series of shelter program objectives were proposed. The program had the following characteristics:

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(1) Each phase was to produce an improved civil defense posture that could be justified in its own right; (2) each phase should have a natural terminal point—meaning that a decision to undertake a given phase did not carry with it a commitment to undertake subsequent phases; (3) each phase should have high legacy value for subsequent phases; and (4) each phase would incorporate the next least costly element leading to an improved civil defense posture.

The end result of such a phased program would provide: (1) a nationwide full fallout shelter program, (2) blast protection for some portion of the urban population, and, finally, (3) blast protection for most of the urban population completing the ultimate posture.

It was against this background that President Kennedy, moved by the Berlin crisis, decided in 1961 to initiate a nationwide, long-range program to provide fallout shelter to the U.S. population. He also decided to transfer responsibility for civil defense to the Secretary of Defense. The transfer of civil defense functions carried with it a budget proposal based on a national fallout shelter survey, marking, and stocking program. The budget called for "an accelerated program in the field of civil defense." A supplemental appropriation was voted by Congress and the National Fallout Shelter Survey was initiated on a crash basis.

The principal reasons adduced for the transfer of civil defense functions were that the Secretary of Defense was responsible for the defense of the United States, and that the DOD represented a large and relevant program capability that could be drawn upon for civil defense purposes. It was also noted that there were strategic requirements for civil defense, and that development of a civil defense posture should go hand-in-hand with development of the strategic force structure. In making the transfer, however, the President made explicit the need for the life-saving potential of civil defense, independent of its relationship to strategic forces or deterrence: civil defense represented "insurance," a lifesaving capability it would be prudent to develop, in case of the failure of deterrence.

The 1963 budget submitted to Congress as a part of a phased program provided funds to continue the survey, marking, and stocking program for another year, and the beginning of a subsidy payment to educational and health institutions for the inclusion of shelter in new construction. Most of the budget was for the subsidy program which required authorizing legislation before appropriations could be obtained. Congress cut the funds for the survey, marking, and stocking program and authorizing legislation was not heard that year. In 1964, the House Committee of the Armed Services considered a bill to authorize the subsidy program. After extensive hearings, the legislation was passed by the House but was buried in the Senate Committee.

Making Full Use Of Existing Shelters

In a general budget environment of 1964-1969, when available funds declined substantially and the prospects of a shelter subsidy receded, civil defense gave increased attention to

maximizing the fallout capability inherent in existing buildings. It was originally estimated that the survey of existing buildings would provide 50 million shelter spaces. By 1970, more than 226 million spaces were in the inventory. Because most of this shelter space was in downtown buildings in major cities, shelters were not properly located for population use when the population was in their residences. In fact, our studies showed only about one-third of these spaces were located properly for use during a period when the population was at home.

Community Shelter Planning

Research on practical means of planning for maximum use of the limited shelter capability being generated by the survey began in 1962. A crucial element in this was the problem of matching people to shelter within certain time constraints or movements. By 1965, the planning methods had been field tested and a nationwide community shelter planning program was launched. Accepting movement limitations, about 30 percent of the population could be sheltered.

An inadequate use of basement space resulted from ventilation requirements. Only about one-half as many people could be sheltered in basement areas as might be possible if better systems of ventilation were available. In the total picture, about 35 percent of the shelter inventory was basement space. A further increase in basement shelter space was possible with cheap improved ventilation systems. Research developed an inexpensive bicycle-type ventilation kit which could also be powered by an electric motor. Funds were requested for procurement and stocking of the kit in 1966 and 1967, but appropriations were not forthcoming.

Home Basement Survey

Another low-cost shelter option was the location of shelter in home basements. After several years of discussion and the development of shielding survey technology, a pilot test of home surveys was conducted in 1964 in areas of Pennsylvania, Minnesota, Mississippi, and Florida. The test involved the distribution of questionnaires, printed on IBM cards, to some 97,000 home owners. Approximately 20 percent were completed and returned. In 1965, another test was conducted involving the mailing of a questionnaire to a sample of U.S. householders with a follow-up by letter and, finally, telephone calls. This resulted in 85 percent return on the questionnaire. The study also documented that the information provided by householders was reliable.

Using the Bureau of Census to gather the data, OCD then conducted a survey of home fallout shelters in 26 States. The survey produced 30 million spaces with a Protection Factor (PF) of 40 or better. Returns averaged 74 percent. The military services conducted a similar survey for on- and off-military post housing, and located an additional 227,000 spaces. These home shelter spaces are better distributed than are public shelter spaces. If plans could be developed to share this space with neighbors and use home shelters like public shelters, this resource might provide a valuable means of sheltering the population under continued budgetary limitations.

Based on this data and the 1970 Census data, there appear to be about 67,700,000 single residences in the U.S. of which 53.3 percent have basements. About 10 percent of these have a Protection Factor of 40 or above, and 78 percent have a Protection Factor of between 20 and 39. This 78 percent could be easily upgraded at moderate cost. In fact, much of this upgrading might be accomplished during crisis periods which might precede a war. If this home-basement shelter space were occupied on the basis of 10 square feet per person, which has been demonstrated to be a feasible occupancy rate, this same fallout shelter space would be more than adequate to shelter the total population. Such an occupancy rate might result in as many as 60 people occupying a typical home-basement shelter. This rate of occupancy would be needed only in areas of severe shelter shortage such as in much of the South and California. In most areas of the Country, even under conditions of crisis relocation, an occupancy rate of two or three families in a home shelter would be sufficient. The private home basement is a major survival resource of the Nation, particularly in the rural or reception areas.

In relation to high-risk areas, civil preparedness studies have evaluated this home base-ment resource from the standpoint of the protection it provides against the effects of blast, heat, and fallout; its location in relation to the distribution of the population; and the degree to which it supports strategies of crisis relocation of populations from high-risk areas and the sheltering of the population without movement.

Shelter protection against the blast and heat effects of nuclear weapons is a different problem from protection from fallout. In blast protection, the most important factor is how the structure responds to overpressures and, finally, fails. In fallout protection, the most important factors are the distance from the source of fallout radiation, and the amount of mass or thickness and density of materials between the survivor and the source of radiation.

Studies of the best available shelter in high-risk areas which might experience blast and heat effects rate the single-family, below-ground shelter as providing better protection than most public fallout shelters. The best available blast shelters are, of course, subway stations, tunnels, mines, and caves, followed by basements and sub-basements of large masonry buildings. Below-ground basement space in wood framed or brick veneer structures, including single-family residences, is the next best protection. In terms of the amount of space available, this is a significant shelter resource in high-risk areas.

The protection from fallout varies from structure to structure. However, as a generali-zation, home shelters provide less protection than public fallout shelters in large buildings; but because of the location of the latter, they are more accessible to the population and, therefore, the only shelters available to some people.

The 1970's

Starting in 1971-72, the civil defense program was broadened to consider peacetime as well as attack hazards and those arising gradually as well as rapidly. This broadening to "full

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"spectrum" preparedness was undertaken by new agency leadership partly because of 1972 Presidential direction.

The latter resulted from a study of alternative civil defense policies conducted in 1969-70. The President decided, based on the study, that the U.S. should maintain the "current overall level of effort in its civil defense activities," and that there should be increased emphasis on preparedness activities applicable to peacetime as well as attack emergencies.

The broadening to full-spectrum preparedness was welcomed by State and local civil defense professionals, and by those at the Federal level as well. To the latter, the dual-use approach was seen as making sense on grounds of economy and effectiveness—basically because the concern of State and local governments for peacetime disaster preparedness helped motivate them to take actions which were also essential for attack readiness.

The 1970's also brought a new stress on operational capability: the ability to make coordinated use in a major disaster of all assets available to a community from warning systems to shelters and radiological detection instruments and personnel, to police and fire-fighting forces, to doctors and hospitals, to the talents of its key executive officials. The primary vehicle used to develop these emergency operating capabilities was termed On-Site Assistance. This involved intensive work with key local officials and leaders by a Regional/State team of civil defense professionals.

The essence of the approach was to work with local officials to define the community's emergency readiness needs in light of what had previously been accomplished, and to develop an Action Plan for making the specific improvements needed. This plan specified local responsibilities and schedules, and also committed both State and Regional offices to provide specific assistance to the locality.

FY 1974 through 1976 also saw the development of the last major element of full-spectrum preparedness—contingency planning to relocate (evacuate) population from U.S. metro-politan areas and other risk areas during a period of severe international crisis. Research work and prototype projects developed planning techniques and established the basic feasibility of crisis relocation planning, certainly for parts of the Country other than the Northeast urban corridor and similar densely urbanized areas.

November 1975 brought a sudden change of emphasis which resulted in a substantial shock to the civil defense organization at all levels. Effective with FY 1977, the program was to be re-oriented to focus DOD support on those functions related to nuclear disaster preparedness. Nuclear requirements were to be built upon a "common base" to be provided by State and local governments for natural disasters. In short, the Federal program was to be nuclear oriented and any non-attack elements of full-spectrum preparedness were to be provided by State and local governments.

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In addition, the President's FY 1977 budget request for DCPA, reflecting the change in focus, was for $71 million which, among other things, reduced matching funds requested for support of State and local civil defense staffs from the FY 1976 level of about $30 million to approximately $20 million. Support for training activities was also reduced sharply, but requests for shelter surveys, crisis relocation planning, and other attack-oriented elements of the program were at levels consistent with those of FY 1976.

These changes in Federal policy stimulated serious Congressional consideration of civil defense for the first time since 1963. A special civil defense panel of the Subcommittee on Investigations, House Committee on Armed Services, held 11 days of hearings in February and March 1976 considering strategic factors, Soviet civil defense, the dual-use issue, funding, and other matters. The Panel's report of April 1976 stated that "it is clear that the program today is under-funded," and recommended, among other things, that " . . . as a first step toward a more adequate civil defense the Administration's budget request for civil defense be increased from $71 million to $110 million."

The narrowing in the focus of the program, and the FY 1977 reductions in matching funds and other areas were not welcomed by State and local governments. At House and Senate hearings in 1976, State and local CD directors argued strongly for Congressional recognition of preparedness for peacetime disasters as, in effect, a secondary but important objective as well as for restoration of $10 million in matching funds for their agencies. The funding was restored by Congressional action and an appropriation of $82.5 million enacted.

Discussions between the Department of Defense and the Congress further clarified the intent of Congress: The major focus of civil preparedness must continue to be preparedness for an attack on the United States. It is also the intent of Congress to provide assistance to State and local governments in emergency situations arising from natural disasters, and such assistance may include preparedness-type activities. This allows the application of personnel, facilities, and equipment to be applied to a common base of preparedness for nuclear attack and peacetime disasters.

The Current Status of 1960 Shelter Programs

The low priority and resulting fiscal constraints since the early 1960's have resulted in a significant deterioration of sheltering capability near the homes or work places of the Nation's population. Shelter stocks have exceeded their intented shelf life and have deteriorated, and many have been removed from shelters. Other system capabilities have also deteriorated. The net result is that the current capabilities of in-place shelter protection are not highly effective. DOD studies indicate that if a large scale attack occurred after a crisis period of about one or two weeks, the current system might result in adding on the order of 10 million additional survivors to a basic survival rate of 80 million without any civil defense program. It would take at least one year of intensive effort and large scale expenditures during a period of heightened international crisis to bring the current in-place protective system to fully planned effectiveness. This would probably increase survival to an estimated 110 million in a larger scale attack.

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Presidental Decision of 1978

In September 1977, President Carter issued a directive relating to U.S. civil defense. An interagency task force had analyzed the current civil defense program, determined the changes that should be made, and offered a range of alternative policy options for the future.

A number of specific questions had been framed for the interagency study. Among these were: "What is the role of civil defense in strategic policy?"; "Can civil defense make a significant difference in the outcome of a nuclear exchange?"; "What civil defense measures would be most useful?"; and, finally, "If a role is identified, what should it be?" Hence, the study looked not only at whether or not civil defense would make a difference in nuclear war, but also at whether civil defense would play a role in a preattack crisis.

The study did not represent a new or sudden interest in the area of civil defense. Rather, this interagency effort followed from earlier work on similar questions and issues. This study, therefore, must be viewed as a continuum of discussion and analysis occurring within the Federal Government since the Kennedy Administration.

In addition to the policy study, other studies examined in detail the feasibility, costs, and performance of alternative U.S. civil defense programs. The intelligence community also produced a report on the status of the Soviet civil defense program. These contributed to the analysis and conclusions of the interagency policy study.[3]

The interagency policy task force worked approximately one year. At the end of that time, the study, which contained a range of options for a future civil defense program for the United States, was presented to the Policy Review Committee of the National Security Council and then to the President. The options included: (1) essentially no program; (2) the current program; (3) a program providing for relocating (evacuating) the population of larger U.S. cities and other risk areas should time permit during a period of strategic warning resulting from an international crisis; and (4) a short warning time, in-place protection program including construction of blast shelters in our cities. The relative lifesaving capabilities found in a heavy mid-1980's attack on military and urban/industrial targets would be: (1) no civil defense—some 20 percent total survivors; (2) the current program—some 30 percent total survivors; (3) effective crisis relocation—some 80 percent; and (4) a blast shelter system—up to 90 percent. Of course, different attack scenarios would result in different levels of survival.

The principal differences between crisis relocation and blast shelter systems have to do with: (1) costs, (2) the time required to protect the population after warning, and (3) the far greater uncertainties associated with crisis relocation. A system including blast shelters for the risk population could cost over $60 billion, but urban residents could be sheltered with only minutes of warning. A crisis evacuation system would cost much less in peacetime and could perform nearly as well—provided that there was available the week or more needed to execute evacuation plans, that a timely decision was made to activate the plans, and that a number of other essential operations worked well (although not necessarily perfectly). Reasonably effective crisis relocation

in some circumstances could result in about the same level of survival as that provided by a far more expensive blast shelter system. Each of the options was presented to the President with an evaluation of its potential effectiveness and associated costs.

The President, in Presidential Decision (PD) 41, then directed that a new civil defense policy be implemented along the following guidelines:

- that the United States civil defense program should enhance the survivability of the American people and its leadership in the event of nuclear war, thereby improving the basis for eventual recovery as well as reducing vulnerability to a major Soviet attack;

- that the United States civil defense program should enhance deterrence and stability, and contribute to perceptions of the overall U.S./Soviet strategic balance and to crisis stability, and also reduce the possibility that the Soviets could coerce us in times of increased tension;

- that the policy not suggest any change in the U.S. policy of relying on strategic nuclear forces as the preponderant factor in maintaining deterrence; and

- that the program include planning for population relocation during times of international crisis as well as be adaptable to help deal with natural disasters and other peacetime emergencies.

The President's decision does not require a new crash program. Rather, the program will require only a modest increase in resource allocations, and will result in a gradual enhancement of U.S. civil defense capability. The policy will also require the dual use of scarce resources at all levels of government by taking advantage of the commonalities in planning and response activities to both peacetime and attack emergencies.

As a policy statement, PD-41 did not expressly contain any program details or associated budget decisions; however, the underlying study for PD-41 outlined program options and their associated costs. One option stressed crisis relocation, the civil defense program alternative which the Secretary of Defense had decided to implement starting in FY 1980, subject to policy and budget review.

The President's policy decision supported the Secretary's program recommendation which was designed to result ultimately in survival of at least two-thirds of the U.S. population in a large-scale, mid-1980's attack, given at least a week in which evacuation plans were executed and other preparations made.

An important point of the President's policy decision is that civil defense capabilities are a factor to be taken into account in assessing the strategic balance. The FY 1980 budget

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request represents a start on developing capabilities consistent with this policy. Thus, this budget marks a turning point in U.S. civil defense.

Reorganization Plan

In June 1978, President Carter submitted to Congress a plan to reorganize the Federal Government's emergency preparedness and disaster response programs. This plan is now effective, and the various agencies and functional elements are being formulated into a new Federal Emergency Management Agency (FEMA). The new agency will replace five existing agencies and assume six additional disaster-related responsibilities. This places responsibility in one agency for all Federal programs involved in preparedness, mitigation, and response to national emergencies ranging from natural and man-made disaster to nuclear attack. The agencies include:

- The **Defense Civil Preparedness Agency** (Defense Department), which administers the National civil defense program.

- The **Federal Disaster Assistance Administration** (Housing and Urban Development), which coordinates and funds Federal natural disaster relief operations.

- The **Federal Preparedness Agency** (General Services Administration), which coordinates civil planning for National emergencies.

- The **Federal Insurance Administration** (Housing and Urban Development), which manages the flood insurance and hazard reduction programs.

- The **National Fire Prevention and Control Administration** (Commerce Department), which administers the Federal fire prevention program in coordination with State and local governments.

The six additional responsibilities to be assumed by the Federal Emergency Management Agency are:

- The community preparedness programs for weather emergencies, administered by the **National Weather Service** (Commerce Department);

- The **Earthquake Hazard Reduction Program**, Office of Science and Technology (Executive Office of the President);

- The **Dam Safety Coordination Program**, Office of Science and Technology (EOP);

- The **Federal Emergency Broadcast System** for oversight responsibility, Office of Science and Technology (EOP); and

- Emergency functions not now assigned to any specific Federal agency: coordination of emergency warning and (2) Federal response to consequences of terrorist incidents.

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The reorganization will achieve the following objectives:

- Making a single agency and a single official accountable to the President and Congress for all Federal emergency preparedness, mitigation, and response activities.

- Creating a single point of contact for State and local governments, who have strongly urged consolidation of Federal emergency programs. (The Carter reorganization plan was endorsed unanimously by the National Governors' Association.)

- Enhancing the dual use of emergency preparedness and response resources at all levels of Government by taking advantage of the similarities in planning and response activities for peacetime and attack emergencies.

The current U.S. program does not include provision for physicial protection of key industrial installations, either by peacetime actions or by planning for actions to be taken during a crisis.

U.S. and European Civil Defense Doctrine and Programs

Civil Defense doctrine and programs of Europe and the U.S. have developed along significantly different lines resulting largely from overall differences in defense strategies. Recognizing their inability to deter war by a build-up in weapons systems, most European nations developed security systems designed to use the concept of massive resistance to attack. The objective was to make it as difficult and costly as possible for a potential enemy to conquer each country. Military and civil defense became equal partners in the strategy. The sheltering of the population, therefore, was an important aspect of massive resistance. With the experiences of World War II still fresh, it was clear that the protection of the people in specially designed hardened shelters would be needed in resisting attack, and in assuring survival and continued resistance. Consequently, in many countries legislation was passed which required the construction of shelters in all new buildings. This legislation was strengthened over time to create an organization and management structure for the civil defense program.

In the U.S., with its greater resources and experience in World War II, the defense debate focused on concepts of developing a capability of massive retaliation in the event of an attack. Military capability was designed to assure destruction of any enemy starting a war, and its mere existence would effectively deter an attack. Civil defense programs were merely a hedge against failure of the primary strategy. The construction of hardened shelters never became a part of the U.S. national defense strategy. The U.S. program focused almost exclusively on the nuclear war hazard; and since fallout shelters provided protection against a widespread radiation hazard and was more manageable in terms of costs, the low-cost fallout program was developed. Later evacuation or crisis relocation was planned as a means of protecting those living in high risk areas.

U.S. Fallout Shelter Program and the European
All-War Effects Shelter Program

Shelter protection against the combined heat, blast, gas warfare, and radiation effects of conventional and nuclear weapons is a significantly different problem than protection from the fallout radiation effects of nuclear weapons. The all-war effects shelter must be below ground, be hardened for blast protection, have an airtight door to protect from gas, and have an adequate ventilation system to protect from heat and radiation. Since such a shelter must be specially constructed, a legislative mandate was necessary including the subsidizing of its cost. The legislative mandate usually required that the shelter have a peacetime use and utility, and that this factor not interfere with its rapid conversion to wartime use. The role of the Government in the creation and use of the shelter is specified in the legislation and, therefore, clear to all, including the owner of the building in which the shelter is constructed.

Fallout shelters have virtually none of these characteristics. They are located through surveys of existing buildings and are seldom created or built. Generally, they provide better protection if they are below ground; however, most of the fallout shelter spaces existing in the U.S. national shelter inventory are above ground space in the interior corridors of large buildings. An additional resource exists in private home basements. State and local governments make community shelter plans for the allocation of this shelter space to the population; but other than periodic planning, there is little direct contact between the owner of the shelter space and the Government.

The legislation passed in the early 1950's and improved upon and modified over the years since has been effective in creating an all-war effects shelter program for some European nations. In Sweden, for example, it has resulted in 3.8 million shelter spaces or about enough for one-half of its population. Shelter building is now focused in meeting specific shelter needs of geographic locations. Peacetime utility and use of shelter space is an integral part of the shelter planning. Most of the costs of shelter construction are reimbursed generally on a shelter-space-created basis. Norway, Denmark, Finland, and Switzerland all reported relatively advanced shelter programs.

The U.S. effort has located, marked, and stocked fallout shelter spaces for about one-third to one-half of its total population. This space can be augmented in a crisis period by home basement fallout shelter, which is an extensive resource. Virtually no new all-war effects shelter protection construction has occurred in the U.S.

In the foregoing discussion, an effort was made to map some of the road that civil defense has had to travel to discharge its responsibility under the law. Regardless of future courses relative to the choice of more effective protection options, efforts must be directed toward creating an organization capable of managing and using the protection developed.

While crisis relocation provides a moderate cost approach to civil defense and a larger lifesaving potential, its effectiveness requires much more than paper plans. As they are developed, such plans must be understood by the State and local officials who will exercise them and, to a lesser degree, by the public who must use them in an emergency.

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Different approaches to sheltering and/or evacuation demonstrate a varying potential to saving lives; however, public behavior just before an attack would determine how closely those potentials were approached during the actual attack. The factors which influence appropriate public response include:

- **The nature, complexity, and difficulty of the required public action.** Thus, the use of blast shelters constructed near homes and places of work require relatively little public knowledge or skill, and a simple and straightforward "take shelter" message. For the public to construct expedient blast shelters requires greater skill, time, and effort; and the capability to perform this action is differentially distributed through various population groups. Crisis relocation requires the most complex public action, access to private transportation or knowledge of alternative (public) sources, and time to execute the move.

- **The need for planning and staffing a CD management effort to implement the program.** The extent of management activity required to implement a program must be assessed against the needs for CD to augment its management capability from the modest precrisis level to the (potentially) much larger organization required to implement a program just before an attack. These personnel must come from other organizations or citizen volunteers and must be trained in the diverse skills required to implement, for example, an elaborate crisis relocation operation.

- **The amount of public knowledge required to take appropriate, orderly action at the time of an "execute" or warning message?** The blast shelter program requires relatively little public knowledge and allows a simple warning message; whereas, the expedient shelter and relocation programs require extensive knowledge and more elaborate instructions.

Civil preparedness is the element of national security most intimately related to the citizenry. In many ways, it is the means by which the individual becomes aware of threat to his personal safety and well-being, and the resulting present war technology. When aroused by international events, public opinion is extremely volatile. For example, during the Berlin crisis of the early sixties, public reaction was marked. All levels of civil defense were inundated with inquiries. The political structure became immediately involved in managing public reaction. This probably resulted in the attention of major decision makers being diverted from a sensible start on a long-range civil defense program to issuing a handbook which finally became a modest government pamphlet, quickly distributed and drawing on the content of earlier materials available to the public. The Cuban crisis marked another clamor for information, In contrast, during periods of low tension, the public remains passive.

Civil defense differs from other "strategic systems" in one very vital respect: For civil defense to perform effectively, both citizens and Government officials in localities throughout the Country must know what to do and must act accordingly in a time of unprecedented stress. Readiness must be developed where the people are; and any feasible U.S. civil defense program must be

implemented primarily by civilians whose attitudes, beliefs, and aspirations must be taken into account.

Since the need for civil defense resulted from changes in the basic environment of man with respect to the nature of conflict and war, and the general environment during this period has been threatening and described as "a cold war," one might wonder about public attitudes relative to the civil preparedness issues. What can be said about the public's concern for their civil protection during this period, while civil defense was developing a fallout shelter-based survival system?

Over time, civil preparedness experience and data on public reactions demonstrate major and strategically important shifts in both attitudes and public behavior during crisis periods. Historically, crisis situations have been of relatively short duration and of rather low frequency occurrence. It does not follow that the future will necessarily parallel the past; hence, more protracted crises seem plausible. Greater frequencies of crises, each subsiding temporarily, also appear possible.

This leads to an important conclusion: What is now described as a "peacetime environment" may itself change into a "normalcy" which might be marked by higher levels of tension and enhanced public, as well as governmental, sensitivity to the possibilities of a nuclear confrontation. Hence, the world situation of the 1980's may be seen as something on the order of a "chronic crisis," or something akin to a lasting "crisis expectancy." This would mean that the attitudes and reactions of the public in this new "normalcy" environment would be more like the past reactions and attitudes under crisis conditions.

Basically, one might postulate three key types of environments. This conceptualization is arrived at not because of the need for a taxonomy, but because of the distinctly different patterns of attitudes and behavior in these alternative contexts.[4]

One such environment is that of "normalcy." By this we mean a period not unlike the current peacetime world situation. It may be characterized by minor ups and downs in the international level of tensions, but there is a low perception of war probabilities and a sense of relative "peace."

In this environment, demands on the part of the public for civil defense preparedness are not likely; favorable attitudes, however, are maintained, though there is very little in the way of a public "follow through."

The second environment is one of a "crisis" or the expectancy of war. This, indeed, is a situation in which the level of international tensions has increased sharply; the expectations of a possible conflict have risen; the mass media, in fact, so report and interpret the global environment.

Clearly, the public's shift from normalcy to crisis expectant perceptions might be preceded by the Government's realization of a more acute threat or might, as the case may be, occur at just about the same time when the Government's assessment of the threat has also increased.

In this environment, civil preparedness measures acquire saliency. The public response manifests itself in requests for information about appropriate measures to take. Educational efforts to enlighten the public to the various dimensions of the problem as well as to the effective ways of coping with the situation are likely to be both demanded and highly effective.

It is, in fact, an environment in which the public **expects** to discover what preparedness systems exist and how they might function; and the public does expect that such systems actually exist and can, to an extent, be made to work.

A crisis period of the postulated type is one in which media reporting helps or hinders effective preparations for coping; in which discussions among family members and with friends, co-workers, and neighbors are not infrequently focused on the crisis itself and its possible outcomes; in which facts as much as distortions, information from official sources as much as rumor influence both attitudes and behavior significantly.

The third environment is one of the "surge" period. This is a situation in which the Federal Government itself has begun taking specific prudent actions, and in which the public has been informed by Government spokespersons directly or through media reports (including "leaks") that such actions are underway.

The basic propositions regarding attitudes and behavior of the public in the crisis expectant environment hold even more strongly during such a surge period. Clearly, there would also be an **expectation** that prudent actions by the Government include measures to protect the nation's populace and property.

The basic pattern then is grounded in a simple observation: the public has maintained relatively high confidence in the Government, especially in the domain of national defense issues. Under normalcy, people go about their own "normalcy" business on the assumption that the Government knows reasonably well what it is doing, and that it is acting in the public interest. Thus, not much happens in the way of clamor for efforts to deal with unpleasant, hopefully avoidable, and somewhat unlikely international hazards.

In a crisis expectant period and, even more so, in what we termed to be a "surge" period, the public **expects** to put to use the systems which it believes the Government has planned for, installed, and made workable. There then emerges a demand for clear-cut answers for the best ways of coping with whatever may come.

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A final, extremely important point regarding the basic issues must be emphasized. It is a simple fact of profound consequence that actions under normalcy conditions are often different from actions in a crisis environment. This has the fundamental implication that many of the things, given a peacetime atmosphere and attitudinal and behavioral ambiance of the Nation, which **Civil Defense must be able and prepared to do in an actual crisis might look "wrong" or "foolish" or "unfeasible" in a peacetime setting.**

Thus, in a deep sense, all programs (and their components) have to be considered along two rather different, and not always congruent, dimensions: how the system would **perform** in an actual crisis and how the crisis-oriented system would **look** when planned for or developed in a peacetime environment.

Within this broader framework, some peacetime programs and efforts have a relatively easy sailing in our body politic:

- programs which minimally disrupt the normalcy of our society and, thus, minimally affect the institutionally, relatively routinized behavior of our people;

- programs which do not dramatically divert the existing resources into untested or different channels;*

- programs which do not require new revenues to be raised;

- programs which do not increase Federal centralization and further bureaucratization of life.

In turn, all peacetime programs and efforts have been, at least in some (though significant) measure, degraded by the dramatic rhetoric—often by the highest officials of the land—which has portrayed a nuclear war as almost entirely nonsurvivable, impossible to contemplate, or even as the "end of the world" event.

A continuation of such an approach to the serious possibility of creating programs and circumstances facilitating national survival would clearly undermine credibility of future efforts as well.

Crisis-activated programs (CRP) and efforts, however, are not so constrained:

- programs which make it possible for people to be effectively prepared to deal with possible **disruptions** of normalcy would be preferred generally over activities which would attempt to pretend that "normal" conditions could be maintained even should the crisis get out-of-hand;

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*Yet, to give rough indications regarding civil defense: if we spend $100 million per year **actually**, our people **think** that we spend about $700 million and believe that we **ought** to spend about $1.4 billion annually.

- the public would accept, and even expect, the diversion of resources, including money and manpower, into operationalization of crisis-activatable readiness plans;

- Federal leadership, rather than decentralization, would be both expected and desired.

In addition to the general factors already mentioned, the following observations have a direct bearing on the credibility of CRP; and they also apply to other major civil defense systems.

- A crisis situation increases anxiety because it increases uncertainty (as to the future, as to what to do now, as to when to take what measures, and so on). Those relocation programs which could reduce uncertainty from the very outset, and throughout the duration of the crisis, will be more credible than will other options.

- It is especially important that there evolve an awareness in the public that CRP includes plans to provide information about understandable, simple, and effective actions for people to take along, with a clear and honest explanation of the rationale for such action in preference over other possible courses of behavior.

- It is essential that, in fact, such information be provided people in a crisis environment and that such an information message be responsive to the different stages of the crisis (pre-surge), to the surge environment, and to the consequences and implications of the futures which would then face the nation.

- Programs which will maximize organizational, institutional, and cultural continuities are preferable over programs which do not do so or do so less.

- Programs which make provisions for the maximum outflow of relocatees in the shortest possible time upon a Presidential directive will prove more credible than programs which might plan for uniform (over time) phasing of evacuation.

- Programs which maximize voluntary compliance and voluntary response, backed up by simple and rational provisions for government intervention on an as-needed basis, will be more credible than programs which are grounded in a fabric of less flexible rules, regulations, and requirements.

- Credibility of CRP will be enhanced by the availability of at least a minimal, credible, in-place civil defense capability. This is largely so because Americans are likely to question the notion that the President would actually order crisis relocation under most circumstances, if at all. Furthermore, many Americans will remain

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convinced that there exist circumstances in which a nuclear war could, or would, begin without a crisis build-up period or with a build-up of such duration that relocation would be impossible even if desired.

- Credibility of both evacuation systems and of in-place sheltering would be enhanced were, at least, "essential" or "key" workers provided with adequate blast shelters.

- Credibility of CRP in the peacetime planning environment will be significantly enhanced if authoritative, simple, consistent **answers** can be given by a **credible** source to questions and criticisms raised by the media, by various interest groups and organizations, and by the members of the general public.

- Credibility will most likely be degraded by attempts at program **oversell**; that is, public communication which would seek to stress crisis relocation is the **only** possible civil defense posture, or the **only** posture which will increase survival chances.

- Credibility, in turn, will be enhanced by media reports about actual host areas that would be prepared, or will have become prepared, to receive evacuees.

Public Opinion Survey—Rationale and Overview

Surveys of attitudes, levels of knowledge, and general adaptive behavior in civil preparedness have been undertaken periodically over the last 30 years. The basic purpose of these surveys has been to (1) provide civil preparedness planners with assessments of the feasibility and likely cost effectiveness of alternative civil preparedness systems, and (2) provide a means of periodic measurement of effectiveness of public information, and training and education programs.

The goal of civil preparedness is to provide a system for improving the probability of survival of the population and the recovery of the Nation from the effects of nuclear and other forms of attack. It is concerned with measures to counter these effects and the organization, public education, training, and other actions to support these measures. In order to be fully effective, countermeasure systems usually require active support by segments of the population during both their developmental (normalcy) and operational (crisis) phases. Each countermeasure system usually has its implementing audience.

Attitudes, values, levels of knowledge, and willingness to participate in learning countermeasure actions tend to limit the effectiveness of civil preparedness programs. The assessment of these factors is important in the choice of future systems and in the selection of programs for implementation of these program alternatives.

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In relation to future planning, the function of the agency research program is to provide a continuous, exhaustive analysis of the full range of possible future vulnerabilities, strategic environments, and civil preparedness program requirements. Such an assessment results in the definition and description of feasible civil preparedness systems. One aspect of this assessment is the likely acceptance and response of the population to the proposed system.

A second and, perhaps, more important aspect of surveys is the development of a system to provide needed feedback for improving the effectiveness of communication strategy, organizational, and promotional efforts. Under Section 201(f) of Public Law 920, the Office of Civil Defense is to "publicly disseminate appropriate civil defense information by all appropriate means." In support of this function and as a part of the systems analysis research effort, a periodic but continuing analysis of attitudes, levels of knowledge, and adoptive behavior of the various publics participating in civil preparedness programs has been undertaken. The studies focus on the various programs and audiences who need to be informed and involved in these efforts.

A basic research tool used in accomplishing these objectives is the attitude survey. Such surveys are used for purposes other than the measurement of opinions, such as measurement of communication effectiveness, and studies of the social action and decision-making processes associated with the adoption at the local level of civil preparedness programs. For all studies involving surveys, attempts have been made to develop sampling techniques that would allow generalization of results of the surveys to wider audiences. Surveys, in addition to accomplishing primary objectives, help isolate and describe salient attitudes, levels of knowledge, and behavior associated with the program.

Background of Civil Preparedness Surveys

From its very beginning, the civil preparedness program has been subjected to speculative and journalistic interpretations of its standing with the public.[5] After the transfer of civil preparedness activities to the Department of Defense, at about the time of the Berlin crisis, the rate of speculation increased. Numerous small private surveys of attitudes found their way into the public media and became the basis of generalizations about the total population. In reality, of course, general statements about public attitudes require a much larger population sample. This booklet is intended to provide a synopsis of current public attitudes toward civil preparedness, based on a population sample of adequate size. More recently, this debate has largely subsided.

While the study of public opinion has been a relatively small part of the civil preparedness research program, it has been a consistent one. Civil preparedness has conducted national probability surveys every three or four years since 1950. Since the response to the cold war is of continuing concern, many other privately sponsored surveys have included civil preparedness and related cold war questions in their surveys. Data from all of these surveys are assembled in

a data bank at the University of Pittsburgh and have the capability of viewing public attitudes over a 20-year span. To give some idea of the extent of these data, the bank represents about 500 studies and about one-half million individual survey respondents. Data needed to analyze public opinion and response during both periods of crisis and periods of noncrisis are available.[6]

Public surveys over a period of 20 years show a very consistent level of public support for civil preparedness including all kinds of civil preparedness programs, fallout shelters, blast shelters, and evacuation. Few public programs command such a broad base of passive support. There is, indeed, a form of "national consensus," with stability over time, toward the need for civil preparedness.

In most public programs there exists opposition and support; and, generally, this is somewhat patterned. There is so little public opposition to civil defense programs, it is difficult to determine who the opposition is. In fact, the public just does not perceive opposition to civil preparedness. During the Berlin crisis, which has sometimes been characterized as "the great civil defense debate," the public did not attend to opposition arguments. The debate was about where are the shelters and will they work. If there ever was a question in the minds of the public about whether a civil preparedness program should exist, it was resolved in favor of the program during the Berlin crisis and has now reached a sort of "ceiling" at which support cannot significantly increase. It is not likely that it will experience greater support or opposition in the future.

A persistent question in civil preparedness is how to make civil preparedness more acceptable to people. In view of a large body of public attitude evidence, this looks like the wrong question. Public education or information programs designed to "sell" civil preparedness probably are not worth the cost. Not because it is difficult to convince the public of the value of the civil preparedness effort, but because they are already convinced of it. An effort to "sell" the small opposition is not likely to be useful because opposition sentiments are couched in a broader ideological conception of the world's strategic environment. In fact, they are related to peace or war issues, completely independent of civil preparedness programs.

The public also regards civil preparedness as a governmental responsibility, not a private, do-it-yourself exercise. People associate civil preparedness with National defense, and trust the Government in this area. They believe what needs to be done is being done. They believe more is being spent and done than is the case, and feel that even this is not enough. Even though the public worries some about war, they do not spend much time thinking about civil preparedness measures other than in a time of crisis.

A small opposition is quite vocal in a crisis period, and crisis periods are generally civil preparedness discussion periods. They are likely to come to the surface again in future crisis periods with their allegations that: (1) civil defense cannot save all; (2) the post-attack environment is too hostile for survival; (3) civil preparedness might be too effective and generate a garrison state; and (4) civil defense makes people accept nuclear war or (5) would upset the stability of deterrence based on mutual catastrophe.

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In short, the public environment of civil preparedness is a problem to decision-makers. Political decisions about the program are difficult, and public attitudes have too low a profile in noncrisis periods to generate and maintain the kinds of political actions required. During crisis periods, decision-makers tend to focus on information requirements of the public and not on program development.

These characteristics of public opinion have also generated an ambivalent policy attitude in the civil preparedness organization. On the one hand, there has been a view at all levels of the organization that a quite professional approach to building a civil preparedness system with minimal involvement of the public is needed. This view argues that crisis periods will be of sufficient length to inform the public how to use the civil defense system. On the other hand, the authority provided civil preparedness to "publicly disseminate appropriate civil defense information by all available means" is taken as a directive to keep the public knowledgeable on a continuing basis. The public education and training task is also linked to the need for public acknowledgement and support for the allocation of funds to operate the system. It is also a fact that the accomplishment of many civil preparedness program elements depend on some form of public support.

It is argued that human history is almost completely devoid of experience where a crisis was perceived as such by major decision-makers, and communicated to the public in such a way as to have them act on it as a crisis. A better history indicates that decision-makers and other people tend to deny the existence of a crisis, particularly if it is likely to lead to conflict. When a crisis is recognized to exist, there has been a tendency to refrain from communicating this information widely for fear of further escalating the crisis.

Public attitudes, while persistently favorable, never seem to be in a form that can be put to best use. They seem to be either too much, or too little. They have just not provided the kind of sustaining environment in which hard decisions about civil preparedness can be made.

**Dimensions of Attitudes and Nature
of Civil Defense Messages**

At this point, a discussion of attitudes and civil defense message content might help put the remainder of the summary in a better context. The first level of prediction of target audiences' response to a communication is the level of comprehension or attitude of the audience relative to the communication. The most likely response is the further reinforcement of a pre-viously held attitude. It is, therefore, important for civil preparedness change agents to understand preexisting attitudes.

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It is also important to understand that attitudes have dimensions or, perhaps better stated, varying levels of intensity. One dimension of an attitude might be defined as its general direction. It could be favorable or unfavorable, or some place between these poles. An attitude may also vary in the **degree** or **intensity** with which it is held. One may feel quite favorable toward the idea that she has a fallout shelter capability in her basement right now; but if she clearly perceives that a nuclear exchange will occur in the next few weeks, her favorability may be much more intense.

An individual has an attitude about everything of which he is aware. These attitudes all have direction and intensity. In fact, people have a sort of hierarchy of attitudes; that is, some attitudes are more important than others in affecting behavior. The relative importance to an individual of a given attitude is called **salience**. Attitudes of importance which influence individual decision-making are described as **salient**. Attitudes that are peripheral to decision-making are **nonsalient**. Salient attitudes are usually well-developed systems of cognitions, evaluations, and action tendencies directed toward an object. Nonsalient attitudes are usually loosely organized.

In public attitude surveys, the salience of attitudes is measured by asking the respondent to rate the intensity of his attitude within a range of other related issues. While about 90 percent of the population reports a favorability toward civil preparedness on an attitude directional basis, it is rated low on attitude salience scales. It is important to remember this distinction. In general, all attitudes are highly favorable toward civil preparedness systems. These attitudes are not held intensely and are usually nonsalient.

It may also be useful to discuss briefly the nature of the civil preparedness message. The central concept of all civil preparedness communications might be described as a negative contingency: a very bad thing that might happen some time. The negative aspect of the message, a possible nuclear war on the homeland, is threatening and tends to increase, become more persuasive, and less manageable as understanding increases about the nature of nuclear war. The contingency aspect of the message relates to an assessment of the possibility of nuclear war occurring.

From this point of view, it might be argued that low saliency of civil preparedness issues is induced by exposure to civil preparedness messages. One of the ways of handling the anxiety resulting from assessment of deterrence failure is to reduce assessments of the likelihood of its occurrence. It is probably psychologically not tolerable or credible to believe that nuclear weapons will be used, that they will be catastrophic in effect, and that one is personally vulnerable to effects of this magnitude. A way of dealing with this threat is to reduce its saliency. It might be argued that in its general nature, the civil preparedness message is difficult to communicate to people. It is uniquely the type of message that people tend to distort or change. The behavior suggested in civil preparedness messages to reduce threat and anxiety cannot resolve these issues for responding audiences. Personal worry over civil preparedness messages can be more easily handled by an assessment of a low likelihood of the threat materializing, by distorting the message, or by just not hearing it.

In the following summary, the direction of attitudes is discussed. The objective is to allow the reader a concise glance at various aspects of public opinion concerning civil preparedness in general, and fallout shelters in particular. The topics chosen are those felt to be of most interest to operating staffs.

International Context

Since civil preparedness programs are influenced by the international environment, it is useful to study and describe public perception of this environment. National surveys conducted since 1961 provide a rich body of data about these perceptions. These studies have measured Americans' perceptions of the problem areas of the world, levels of world tension, the likelihood of "World War III," and the countries perceived as a threat to peace. The 1968 survey, when compared with previous years, indicated the international environment was viewed as increasingly tense. The proportion of respondents who perceived high world tension increased from three-fifths in 1963-1964 to about three-fourths in 1966-1967. In 1968, about one-half of those having an opinion thought World War III was likely, or very likely. China is viewed by one-half of our population as the greatest threat to world peace now, and as becoming an even greater threat in the next five years.

But important changes have been in the making throughout the period in which surveys have been carried out. Basically, the likelihood of thermonuclear war has been characterized by a declining overall trend. By 1972, not more than one in four Americans thought that another major war would come about.[7]

Up to about 1966, the Soviet Union was seen as the greatest threat to America's security and to world peace. Even in 1968, some three out of 10 respondents held such a view. However, China had displaced the Soviet Union as the major perceived threat by the mid-1960's, perhaps due to the fact that the conflict in Vietnam seemed to have been more frought with risks of confrontations with China than with the Soviet Union.

The evidence indicates that by 1972, in part directly related to the visits both to the People's Republic of China and to the Soviet Union by President Nixon, hopes for modest improvements in relations between the Soviet Union and the United States, and also between China and the United States have become quite manifest.

A 1976 survey conducted by the Gallup organization concluded that Americans see the Soviet Union as virtually equal to the United States in military power. The United States is seen as no longer the number one military power in the world. The public also assesses this to be the state of military balance 10 years from now.[8]

Threat Perception

The 1978 National study[9] sought to assess perceptions of risk along several dimensions: (1) the feeling of an ambient sense of danger; (2) the threat of nuclear war; (3) the risk to the geographic area of each respondent's residence should nuclear war occur; and (4) the danger of nuclear events other than those predicated on a war scenario.

The ambient threat was measured by probing into the perceptions of international tentions. As in other studies, the survey sought to determine (relative to a scale from 0 to 10) how tense the current world situation seemed to be; how it appeared, on recall, some two years ago; and how it might, by expectation, evolve over the coming next two years—to about 1980.

The threat of nuclear war was assessed by seeking estimates of war likelihood, which is an index of threat intensity, and by asking about the timing of such a war—when might it occur, if at all— which helps to assess the acuteness of the danger, such as it may be.

The area-specific risks—themselves contingent on the actualization of a war— were measured by probing whether Americans thought that the Country's area in which they live would be a likely target. In turn, should the area not be a focus of a direct attack (a target), what might be the level of danger that secondary weapons effects (fallout) would present.

Finally, the current conceptualization of "other than war" nuclear hazards included a concern over the nuclear power plant accident, a terrorist take-over of a nuclear power facility, and the possibility of a nuclear weapon (regardless of the means by which it might be acquired) in the hands of some terrorist group or organization. The likelihood of such hazards was measured over a time horizon stretching up to 1985.

Of the three non-war nuclear threats, two are area-specific and one is more diffuse or ambient. A nuclear power plant accident or a terrorist take-over of a power plant (with the attendant potential threat to "blow it up" unless whatever demands are met) refer to dangers which are geographically circumscribed, with a particular nuclear facility at the hub of the plausible problem. In turn, the (blackmail) use of a nuclear device on the part of some terrorist group or organization is not geographically definable in that the danger might possibly arise anywhere, and its blackmail "effectiveness" might well be the greatest in or around the most densely populated areas of the nation: the major cities.

The 1978 survey incorporated these threat perception themes for a simple reason: In a world without risk, emergency preparedness systems would, presumably, not be needed at all; in a threatening world, an expectation of higher receptivity to all those factors which go into measures to prevent a risk from actualization, a readiness to cope with it should it materialize anyway, and a capacity to minimize its effects and aftermaths.

In the National studies of 1963, 1964, 1966, 1972, and 1978, respondents were asked about the level of international tensions. Table 1 presents long-range trends relative to the manner in which Americans view the international context.

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All of these surveys, with the exception of 1978, sought to determine not only how people assessed the then-current level of tensions (on a scale from 0 to 10, from zero to "maximun"), but also how they evaluated, by recall, the tensions two years prior to the survey date and, by anticipation, the tensions two and five years in the future. In the 1978 survey, the five-year time horizon, somewhat regrettably, was omitted.

Table 1: Perceptions of International Tensions

Level Of Tensions In	Year Of Survey				
	1963	1964	1966	1972	1978
1961	6.51				
1962		6.57			
1963	6.95				
1964		6.92	5.61		
1965	7.03				
1966		6.90	7.59		
1967					
1968			7.42		
1969		6.22			
1970				6.91	
1971			6.35		
1972				7.02	
1973					
1974				6.54	
1975					
1976					6.23
1977				6.15	
1978					6.70
1979					
1980					7.12

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The basic "story" is straightforward enough as follows:

- International tensions were seen as **moderately high** throughout the period—in the 6 and 7 point range of the 0-10 point scale.

- The middle sixties and early seventies were characterized by higher, current-tension perceptions than either the early sixties or the late seventies.

- In every case, the past (two years ago) seemed better than the present (as of the year of the survey), though not substantially so.

- In general, the future seemed somewhat better than the present, especially over the five-year horizon; however, there are two crucial exceptions with respect to the two-year perspective:

  (1) The 1963 survey reveals a pattern of tensions increasing, if only somewhat, from the past, to the then present, to the future.

  (2) The 1978 survey displays a similar pattern in which lower, past (1976) tensions have increased into 1978, and are further expected to increase toward the end of the decade.

- The major tone of the data, of course, shows that the world is anything but risk-free; and that a sense of danger has been felt by people whether they assess the recent past (two years ago), the present (as of the date of the surveys), or the future (two- or five-year perspectives, respectively).

The pattern of tensions of the 1960's may well be, in large measure, explainable by the context of the war in Viet Nam. This, of course, makes the 1978 data particularly important: The world environment is seen as deteriorating, though not dramatically so, even though there is no current conflict in which the United States would be engrossed in a major political, not to speak military, manner.

Threat Of War

If questions concerning international tensions is indicative of a more diffuse sense of concern, the issue regarding the possibilities of nuclear war is quite specific, as shown in the following table:

Table 2: Likelihood of Nuclear War

Study Year	Percent Evaluating Likelihood As 50-50 Or Higher	Likelihood Index*
1963	53.2	.456
1964	49.9	.423
1966	51.8	.432
1972	49.2	.415
1978	58.6	.469

*In the 1963, 1964, and 1966 surveys, a likelihood scale from 0 to 10 was used.

In the 1972 and 1978 studies, the 5-point scale is converted to a 0-1.00 scale. Those who said that a nuclear war was "very likely" were assigned a value of 1.00; the respondents who thought that war was "likely" were given a value of 0.75; those in the 50-50 bracket were given a value of 0.5; the Americans who considered a nuclear war "unlikely" or "very unlikely" were given values of 0.25 and 0.00, respectively.

The key conclusions are of the following kind:

- The anticipations regarding nuclear war were higher in the 1950's (without providing the actual evidence here, but based on numerous surveys of the period) than in the 1960's or in the 1970's.

- The late 1960's and the early 1970's were characterized by a lowered perception of a nuclear war threat (and, as we have seen, not necessarily by lowered perception of overall international tensions, largely attributable to the Viet Nam conflict which, by implication, did not seem likely to escalate into a major nuclear confrontation), whereas the dangers seemed greater in the early 1960's—and again in late 1978.

- The 1978 data reveal the highest expectations of nuclear war over the 15-year interval which the particular national studies cover. This, in turn, is in keeping with the heightened sense of international tensions in terms of the pattern of changes from past, to present, to future.

- The trend between 1972 and 1978 is particularly crucial in this regard—and it manifests itself as a change from 49.2 percent to 58.6 percent of those who consider another world war as having 50-50 or higher probability, and as a shift by 0.054 points on the likelihood scale itself.

Furthermore, the aggregate result may mask some important regional differences.

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In analyzing Congressman Skelton's data—from the 4th Congressional District of Missouri—(based on telephone interviews of a sample of 300 from the 16-county area and using an instrument designed for that purpose, hence, involving many identical items to the 1978 national survey), it is suspected that the pattern of threat may be different for those areas of the Country which are somewhat more like the Missouri district. [10]

Though the percentage of Missouri respondents assigning a 50-50 or greater probability to nuclear war is not dissimilar to the national sample (61.0 percent in the Missouri district and 58.6 percent nationwide), the likelihood index is 0.621 in the 4th District and 0.469 nationally suggesting a different distribution giving rise to the overall measure.

As far as the underlying tendency is concerned, the results support the conclusion that the threat of war is seen as having increased by the late 1970's, as compared with the early part of the decade or the latter years of the preceding decade. The 1972 study indicates that the median number of years within which a nuclear war is expected is about 7-1/4 years (about late 1979), and 34.0 percent of the respondents placed the possible conflict into the interval of 10 years and beyond.

In 1978, the median war expectation lies within the 9-1/4 year range—in the middle half of the late 1980's—with 66.4 percent of the respondents, i.e., of the total sample: while the median is estimated only on the basis of those who were willing to provide a time assessment, placing it into the 10-year plus bracket; but, indeed, 10 years being the modal response characteristic of 26.2 percent of the total sample. Hence, the conclusions are as follows:

- The threat of nuclear war is perceived to be both real and serious.

- The threat is, however, not "acute" in the sense that war would seem to be, from the perspective the population, imminent or relatively imminent.

If it is assumed that the population **does not want war** (an assumption which is so eminently reasonable as to be just about beyond challenge, although recent empirical evidence is not available to substantiate it precisely because it is felt such evidence is not needed) the data—with analytic refinements to follow in subsequent reports—suggest the following obvious policy implications:

- The reality and the severity of the perceived threat facilitate a national climate of opinion in which Government actions are oriented toward reducing, minimizing or doing-away-with the threat, e.g., deterrence, negotiation, arms control agreements, disarmament measures, etc.

- The reality and the severity of the threat also suggest a national ambiance in which actions to minimize the impact of war, should it occur and should it not become avoidable by the measures previously mentioned, would also prove welcome, i.e., active as well as passive defense systems.

- In principle, the data would indicate that **both** measures of war probability reduction and war coping should prove appreciated by the Nation's body politic in the absence of certainty as to whether threat reduction is possible or likely, or whether effective coping measures might not only help to deal with the war insult, should it occur, but also to reduce the threat (as an aspect of deterrence).

Furthermore, the basic nonacuteness of the otherwise real and serious threat has still another implication for policy:

- There is a sense of "reasonable" lead time over which measures to reduce the war probabilities or to deal with the consequence of war can be taken. On the whole, the nation is seen as having 10 or more years to "tool up" for a potential war or to decrease its risks, and thus "tool up" for not having to face the prospects of such a conflagration.

- The nonimmediacy of the danger is a factor in its low saliency and low saliency is a factor in low levels of actual demand for war likelihood reduction or for emergency preparedness systems, so that Government cannot expect to be "pressured" (by the Nation's body politic) to do anything, but can, in an optimal world, provide leadership, thereby responding to the uneasiness which permeates the Country.

For some Americans, of course, no risk of war seems to exist. In 1978, when asked about the likelihood of war, 2.3 percent of the respondents refrained from answerinf the question in terms of the probability scale and emphasized that a nuclear war would simply never happen. When asked about the possible timing of a nuclear war, 7.8 percent volunteered the view that such a conflict would never come about.

This indicates that some proportion of those who really thought a war had **zero** probabilities, initially said that a conflict was "very unlikely" and only when forced to consider the timing of such a war chose to make clear that this "very unlikely" response actually meant "zero" likelihood.

Given the sample size, we may conclude that the national percentage of those, 18 years of age and older, who discount the threat of nuclear war altogether lies, with a confidence level of 0.95, between 5.8 and 9.8 percent. This is a somewhat lower percentage than the 1972 national study revealed. In this early 1970's inquiry, 13.1 percent were convinced that a nuclear war simply would never occur; and with the respective sample size (N=1302), this yields an estimate (at the 0.95 level of confidence) at between 11.1 and 15.1 percent for that time period. Thus, if the overall likelihood of a war has increased)though its probable timing has shifted further into the future), the expectation that war would **never** come declined at the same time.

There was also an increase in anticipating a Soviet Chinese war. In 1972, the likelihood index was 0.373 (with 38.5 percent falling into the 50-50 and higher likelihood categories), while it was 0.473 (with 56.9 percent in the corresponding likelihood groupings) in the current study. Since a Soviet-Chinese war might, under some circumstances, lead to an American involvement, the question was asked about the likelihood of such involvement among those Americans who thought that a conflagration in the Far East was at least as likely as not.

Among those (38.5 percent) 1972 respondents, an American involvement yielded a likelihood of 0.542; among the 1978 interviewees (56.9 percent), the likelihood turned out to be 0.608.

Area Risk

By using TR- 82 assessments, and "locating" each respondent (in terms of the Primary Sampling Unit) relative to residing or not residing in one of the high-risk areas of the Nation, 74.8 percent of the 1620 interviewees in the 1978 survey live in designated high-risk areas![11]

This information permits comparisons between the perspectives on emergency preparedness measures between those who live in riskier parts of the Nation and those who, by the attack premises of the TR-82 analysis, reside in safer areas.

Be that as it may, 53.4 percent of the 1978 respondents believe there exists a "certain" or a "very great" danger that their residential area, somewhat broadly conceived, would be a likely target. The likelihood which the data imply is about 0.642; and this compares with the 0.619 index (48.7 percent in the "certain" or "very great" danger categories) in the 4th Congressional District of Missouri.

Both the national 1978 data and the Summer 1978 Missouri results suggest that many people in high risk areas may be simply unaware of the dangers. Indeed, although just about all of the counties in the 4th Congressional District of Missouri are located in a high risk region, the target danger index, 0.619, is lower than it would be were the residents actually attuned to the risks they might have to face. Similarly, since some 75 percent of the national respondents actually live in high risk areas, the overall index, i.e., likelihood of being in a target area, of 0.642 also suggests a greater feeling of safety than analyses of the TR-82 variety would support.

The 1972 survey found that 43.4 percent of the 1302 respondents thought they were residing in likely target areas, and the likelihood index of 0.621, along with the percentage of respondents under perceived severe threat, indicate an upward shift between 1972 and 1978. If a particular area were not to prove to be a target, 48.3 percent in 1978 and 49.2 percent in 1972 expected that their general residential areas would be exposed to significant fallout. The likelihood (of fallout) indices yield 0.637 in 1978 and 0.672 in 1972. However, only 1.5 percent in both 1972 and 1978 were convinced there would be **"no danger"** of fallout at all; and 4.4 percent (1978) and 3.1 percent (1972) felt rather sure that their areas were also in **"no danger"** of being a likely target. Also, many were quite convinced that their own residential areas would be impacted by such a war, either by being an actual target or by being subjected to significant fallout effects. In this regard, the study indicates that the epidemiology of the

target risk may actually somewhat underestimate those dangers which more objectified analyses, such as those on which TR-82 was predicated, might point to. Furthermore, most of those who believed themselves in the pathway of an adversary attack had also a fairly clear idea—accurate or not—as to why their particular areas would be included in a targeting plan. The feeling that the world is rather safe from a risk of nuclear confrontation, or that their areas are rather safe should a conflict come about, characterizes only a few citizens.

Under these circumstances, it is difficult to imagine that the populace would want to do nothing or only a little in the way of emergency preparedness. But then, of course, what they might be willing to do, or what might be more objectionable is precisely a central theme of this inquiry.

Other Nuclear Hazards

In the 1970's, many nuclear power plants have become operational; others are under construction; still others are in various planning stages. Without doubt, the development of nuclear energy has become a subject of heated controversy; and risk of accidents has received wide publicity.

But other dangers, too, have been suggested. For one, the possibility that a nuclear facility might be taken over by terrorists and that they might threaten nearby communities as "hostages". Second, the possibility that terrorists might acquire a nuclear deivce, even if only a small one, has also emerged—particularly because of the wide publicity received by two under-gradutate students (one at Princeton and one at M.I.T.) who were able to design and construct potentially effective small nuclear weapons.

Since diversion of weapon-grade uranium or of plutonium is not an impossibility, the problem of nuclear power facilities has come to be compounded not only by problems of waste storage, but also by the risks of theft and terroristic misue of nuclear materials.

No questions of this type were raised in the 1972 survey—and the issues were simply not salient at all in the 1960's. However, the 1978 survey included several probes into the nuclear dangers of a nonwar variety because the concerns have become real, and because the underlying issues have come to be placed on the Nation's agenda.

Table 3 provides the likelihood indices associated with the three major hazards about which specific questions were asked in the course of the 1978 study.

Table 3
Likelihood of Selected Nuclear Hazards
(1978)

	Likelihood Index (By 1985)
Nuclear power plant accident*	.479
Terrorist takeover of a nuclear facility	.470
Acquisition of a nuclear device by terrorists** and threat to an American city or community	.512

*An accident which would release significant fallout.

**The item implies an actual threat to a city or other community in the United States based on terrorist claims that they have a nuclear device.

If the populace underestimates the target risk to their areas in the event of a war, they appear to overestimate the well publicized hazards of a power plant accident of major proportions. But the concern is quite clearly real; and the data on possible terrorist actions, e.g., facility takeover or nuclear blackmail of an American community, further underscore the not insignificant worry of the Nation. At the same time, the favorableness index regarding power plant installations is 0.581 (with 61.2 percent being either "strongly in favor" or "in favor" of plant construction) so that the populace, in effect, tend to say that the risks are, on the whole, worth taking.

Nonetheless, when it comes to having a nuclear facility within a 50-mile radius, the picture changes in important ways: 45.1 percent of the respondents fall into the favorable categories, while 48.5 percent tend to be inclined to oppose; and the favorableness index falls to 0.460. Thus, nuclear power plants "somewhere else" rather than in one's (50-mile) vicinity are significantly more acceptable.

In general, Americans hold the view that the Cold War is likely to go on indefinitely. People desire disarmament and are favorably disposed toward a wide range of proposals for lessening and controlling world conflict. However, when asked about possible outcomes, they have a low appraisal of these measures becoming a reality, or if actualized, that they will significantly reduce world tensions. Data gathered over the last 10 years clearly demonstrate that the public perceives the international environment as increasingly threatening.

Worry About Nuclear War

A little under one-half of the population say they are worried about nuclear attack. People in the eastern part of the United States and on the Pacific Coast worry more. The less educated and those having low socio-economic status tend to worry more. People with greater responsibilities, e.g., young parents, worry more. Yet, there are fewer people who do worry about nuclear war hazards in the 1970's than there were in any preceding period.

Soviet and American Strength

To anchor some of the views of the populace regarding the international threat, its nature, and some means of coping with it (with an emphasis, in this inquiry, upon civil defense systems), it was important to ascertain how the respondents compare Soviet and American military might. By their own admission, the judgments do not rest on a very solid information base and are, therefore, perhaps more intuitive or ambient than knowledgeable. This is inferred simply by noting that the self-evaluations of information level are lowest when it comes to U.S. civil defense, the Soviet Union in general, and national defense in general.

The 1978 respondents were asked the same three questions as were the 1972 interviewees: to compare the strength of the two superpowers with regard to strategic weapons; to compare the two nations with respect to overall defense capabilities; and to contrast them in terms of civil defense systems, specifically: A summary of the results, both for the 1978 and the 1972 nationwide surveys, is presented in Table 4.

Table 4
Perceptions of Comparative Soviet and American Military Power

	Strategic Capabilities		Defense Systems		Civil Defense	
	1978	1972	1978	1972	1978	1972
The Soviets are seen stronger or much stronger	29.1	29.7	29.1	25.6	39.7	26.0
Soviet and American military might is seen as about equal	47.0	51.5	47.0	45.6	28.8	27.3
The United States is seen stronger or much stronger	14.8	11.7	13.9	19.2	10.1	17.7
Relative strength index*	.556	.561	.555	.529	.634	.529

*Index values over 0.5 indicate greater Soviet than American strength perception; index values of 0.5 indicate equality in military power; index values below 0.5 indicate the respondents believe that America is tronger than are the Soviets.

The major conclusions which can be derived from these aggregate data are as follows:

- With regard to strategic or attack weapons, there has been little change in the Nation's views since 1972. The strength index favors the Soviets on both occasions; but equality in strategic military might remains the dominant response.

- In general, in defense capabilities as well as in civil defense, there is a sense of increased Soviet might. This is especially so regarding the civil defense programs of the two nations.

- The modal response regarding overall defense strength is one of equality in both 1972 and 1978.

- With respect to civil defense capabilities, the 1978 modal response favors the Soviets rather sharply; while the 1972 data show about as many people believing that the civil defense programs of the superpowers were about equal, as felt that the Soviets already had a superior capability.

- In terms of strategic systems, defense as well as civil defense, the percentage of Americans who believe the Soviets to be stronger than the U.S. exceeds, by significant margins, those who maintain U.S. superiority. For strategic weapons and general defense capabilities, the difference is one of a factor of about 2; for civil defense comparison, the difference favors the Soviets by a factor of nearly 4.

- All the "strength" indices, both in 1972 and 1978 (with increases over the years with respect to defense capabilities in general and civil defense in particular) imply a national belief that the Soviet military might surpasses that of the U.S. though not, except with regard to civil defense, by impressive margins as yet.

Whether the prevailing sense of having become the "military power" has an important bearing on the way the populace look at the world or on civil defense (or other defense) needs can be ascertained, to an important extent, once comparisons are made between those who consider the Soviets stronger, those who believe that the two superpowers are of about equal strength, and those who are convinced of continued U.S. military superiority.

Arms Control

Systems of civil defense can, in a variety of ways, subserve different national objectives. It may be, indeed, quite arguable whether some civil defense programs themselves contribute to deterrence or not. It may be arguable whether or not, by contrast, such systems may imbalance the tenuous equilibrium on which (nuclear) peace might be seen to rest.

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It may well be that, in effect, the major contribution of civil defense lies in the Nation's improved capabilities to cope with natural and man-made disasters rather than with the hazards of nuclear war, since such other emergencies are both more likely and more frequent. Yet, the major underlying objective of all civil defense systems which have any responsibility in an environment of nuclear confrontation is to minimize damage to life and property. Thus, civil defense measures aim, above all, at blunting the effectiveness of an attack on the United States should such an attack ever actualize.

It is similarly clear that, apart from other broader national goals, measures of arms control and disarmament focus on the reduction in war probabilities or, as a minimum, on changes in the natures and magnitudes of possible attacks. But if arms control agreements, past or hoped for, alter, in some degree, the likelihood of war—perhaps even mainly by simply creating an international climate in which such agreements are possible, thus keeping the super-powers around the diplomatic table—short of dramatic measures of disarmament, the threat of war cannot quite go away altogether. Some successful efforts in threat reduction are then not, objectively or otherwise, tantamount to the disappearance of the danger.

The 1978 survey repeated a series of questions concerning more general arms control and disarmament agreements. The data in Table 5 summarize the aggregate findings for the identical items of both the 1972 and the 1978 inquiry. Based on these data, the conclusions are as follow:

- Except for a far-reaching agreement which would, in effect, make the United Nations the military world government, all the postulated major options find more support than opposition in the Nation's public, both in 1978 and 1972.

- The most desired measures have to do with the "N—th" country problem—a finding which holds again both in the early 1970's and in the late part of the decade: the prevention of proliferation of both nuclear and conventional arms.

- Maintaining current nuclear force levels or, in fact, decreasing them by natural agreement are other programs which find strong support in the Nation.

- Except for an agreement to do away with ABM's altogether, there is a slight shift in desirability of all measures between 1972 and 1978: the data indicate a small, but consistent, drift toward slightly lower levels of support for the various alternatives which the study postulated

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Table 5
The Nation's Views on Several Arms Control and Disarmament
Disarmament Measures

	Percent					
	Positive Responses		Negative Responses		Desirability Index	
	1978	1972	1978	1972	1978	1972
Preventing the proliferation of nuclear weapons	69.8	69.3	14.4	13.3	+1.55	+1.60
Agreeing to stop arms shipments to all other nations	64.5	64.6	18.4	15.4	+1.26	+1.41
Agreement to maintain not more than current nuclear force levels	62.4	64.3	17.1	13.3	+1.16	+1.40
Agreement to decrease the current nuclear force levels	61.7	*	22.1	*	+1.07	*
A safe secure mutual inspection system	56.2	59.5	25.7	22.3	+0.78	+0.97
Eliminating all nuclear tests	51.1	55.2	29.4	27.7	+0.61	+0.83
Agreement with all nuclear powers to destroy their whole nuclear arsenals	48.3	46.9	34.4	32.9	+0.40	+0.45
Agreement to have no ABM's at all	45.8	39.4	34.3	35.6	+0.34	+0.15
Agreement among nations to maintain armed forces large enough only to keep internal order	46.5	51.7	35.3	28.8	+0.25	+0.63
A U.N. police force armed with nuclear weapons to be the strongest army in the world	29.1	30.7	48.6	43.3	−0.62	−0.46

*not asked

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In principle then, the Nation's public is favorably disposed both to almost all methods to reduce the risks of war by arms control and disarmament agreements, and to civil defense programs to decrease the negative consequences of an attack should it ever happen. The main implication of this general finding, of course, is that the Nation does not see arms control agreements (such as might result from SALT) at odds with prudent measures of civil defense. The prospects of significant agreements with the Soviets in the next two years are seen as fairly high, and further improving toward 1985. However, data on the threat of war and the timing of such a war also indicate that such significant progress in arms control agreements does not seem to convince the populace that the measures would turn out to be such as to make war either extremely unlikely or even impossible.

General Favorability

When asked whether or not they favor fallout shelters, Americans consistently indicate substantial approval. National surveys conducted in recent years show a large majority of the American public in favor of shelter protection. The surveys completed in recent years found 87 percent of the population in favor of fallout shelters; this level of favorability was 20 percent higher than in 1963.

Other studies also found the level of favorability in recent years reaching and remaining around the nineteenth percentile. With reference to fallout shelters, the combined categories of "opposed" and "strongly opposed" have dropped from 29 percent in 1963 to 13 percent in 1968. During the same period, those who strongly favored shelters increased by slightly over 25 percent, indicating a much greater awareness and acceptance of fallout shelters. In 1972, those who were in favor of public fallout shelters amounted to 75 percent of the nationwide sample—and those opposed, or strongly opposed, were 13 percent of the respondents.

The 1978 survey did not measure whether people, in a general way, approved or disapproved of civil defense. The survey did ask about the desirability of a situation in which America would do away with any and all civil defense programs. This is, indeed, a unilateral "no civil defense" case. As an aspect of various possible arms control and disarmament agreements, the desirability of reaching an agreement with the Soviets to do away with the respective civil defense programs of both nations was also probed. The conclusions were straightforward as follows:

- On a scale which could run from (-3) to (+3), unilateral discontinuation of civil defense has a negative value of -1.92, with 78.3 percent of 1978 Americans falling into the response category which would oppose doing away with civil defense in this manner.

- An agreement with the Soviets to discontinue civil defense, hence bilateral dismantling of civil defense, has a value of -1.55 with 65.8 percent of the respondents being opposed.

Program Support

Specific program proposals have been presented to the American public for evaluation in a number of surveys. The same alternative program proposals have been included in four national surveys conducted over the past several years. This has enabled trends in program desirability by the American public to be studied.

In practically every instance, there has been majority support for each program or alternative, even when the alternatives differed considerably. During the period from 1963 to 1966, the proportion of the citizenry finding most of the civil defense program proposals "highly desirable," increased by some 10 percent to 15 percent. However, the proposal that large communities be evacuated in tense situations which might precede a war lost some 12 percent of its previous support in overall desirability between 1964 and 1966. Yet, even though public fallout shelter programs sponsored by the Government receive the most support, it still must be stressed that the public seems willing to support a vast range and variety of civil preparedness programs. This is not surprising when the finding that one-half of the population in one study supported the statement: "A person should go along with any fallout shelter program the Government proposes."

This summary does not examine the relative public acceptance of the various programs, but is concerned with the overall patterns of acceptance and support that respondents are willing to provide to a wide range of proposals. The examination of the alternative, **desirability** of civil preparedness programs, finds substantial consensus on most of the alternative programs. The only real "split" in public opinion is found with regard to the provision of family fallout shelters at the family's own expense.

Saliency of Civil Defense

When placed on a list of 15 problems facing the United States today and asked to rate them according to their importance, none of the respondents rated civil defense as an important problem in the 1968 national survey. Saliency of civil defense has been very low in all CD studies, but now seems to be dropping off all lists. This has occurred during a period when perceptions of world tensions are increasing: About 76 percent of the same sample felt world tensions were high; the same indicated 44 percent of the population felt World War III was likely or very likely some time in the future.

Public Perceptions of Local Civil Defense Programs

Past studies indicate that the public interest in civil defense and their willingness to cooperate with the program are related to whether a nuclear crisis is seen as imminent or very probable. Even though the 1968 survey found a greater level of fear than before, the public still does not see itself as precariously living in the shadow of nuclear confrontation. Under these conditions, it is no surprise that public knowledge of the local civil defense program was minimal:

- Three out of four respondents know nothing of what is being done at the local level;

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- only five percent associated civil defense with national disaster preparedness; and,

- this lack of opinion is probably a reflection not only on the lack of information, but also on the remoteness of civil defense from the lines and concerns of the populace.

A sizeable part of the sample said civil defense had "no personal meaning to them." of those who had an opinion (27 percent), a little over half (59 percent) felt the local programs were inadequate. Public evaluation appeared to be related to the receipt of information such as booklets or assignment to shelters.

Civil Defense Warning

In 1964, a study completed the state of knowledge assessment about likely public response to warning. This study analyzed data from studies of accidental alerts, and from surveys of public attitudes about warning gathered in national and community studies. Data from studies were analyzed and organized into 17 summary statements. One might make the assumption that an effective warning system will have a signal that is audible, correctly interpreted, and properly responded to by the public. [12]

In attempting to evaluate civil defense warning systems, one of the inputs is the amount and quality of information held by the public with regard to responding appropriately to an alert situation. If it is discovered that the public's knowledge is inadequate, this may suggest training and education programs to provide the needed information. Yet, a lack of information may not seriously impair the proper functioning of the warning system in the case of a crisis having a gradual escalation of intensity. In such a situation, it is assumed that there would be sufficient time and motivation to search for the information to cope with the problem. Indeed, it has been suggested that such crises can be useful in educating the public **provided**, of course, prior planning is done for disseminating the needed inputs.

Over the history of the existence of civil defense, the warning system has changed. Some of the following results relate to earlier aspects of the warning message system; however, they will provide useful insights about public knowledge and opinion and will, therefore, be summarized.

The survey evidence indicates a substantial number of people cannot discriminate between the "alert" and "take cover" signals (not now used). About one-half of the population recognized radio as a source of warning information. The telephone was also thought to be a source of warning or warning confirmation. (Present plans call for the use of the **Emergency Brdacasting System** to confirm warning.) About 15 percent to 20 percent of the population say they cannot hear outdoor warning signals. The public responds to warning by searching for additional information, rather than directly responding by taking shelter. This is expected in the present low saliency environment. This could change rapidly under crisis conditions.

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In early 1964, one study sought to check on the potential acceptability of what was then called the NEAR device. Americans were quite favorable to having a NEAR receiver, and millions were estimated as potential customers. A 1972 survey tried to determine the extent to which the public might be favorable to DIDS-type device: a warning system that could be attached to television or radio. The research discovered that some 69 percent of the respondents were in favor of having such a device, and that they were willing to pay, on the average, about $15 for it. This, of course, does not necessarily mean that some 70 percent of the Nation's households would avail themselves of the warning device were it marketed. Rather, particular methods of marketing and, of course, the eventual price factor would be determinants of the saturation level of purchases. Yet, the results do suggest considerable potential.[13]

Because past surveys considered warning for "out of the blue"-type conflicts, the 1978 survey considered strategic warning, which suggested the onset of hostilities following a period of escalating tension. The survey attempted to ascertain public views on "actionable warning time" in a more strategic or crisis-nested environment. This survey did not include questions about warning time with respect to an imminent attack. Rather, it attempted to assess the time people thought they would have from the moment they would, by whatever means, conclude that war was about to breakout.

The study sought to find out how people might use this time, what they would actually do, or, at least, what they claim they would do during this time period. Since crisis relocation is to be a major thrust of civil preparedness in future years, the study sought to ascertain whether the public believes there will be enough time between warning and the onset of hostilities to allow relocation. In a significant way, the credibility of crisis relocation planning may rest on time feasibility of relocation and on the public's view of available time.

The study found that many Americans expect a sudden war at the onset of tactical warning, and at least 20 percent anticipate no warning time at all. Political, military, and economic crises are the primary circumstances under which many Americans will decide that war is likely to occur. Some 20 percent of Americans indicate they will take no protective actions at all; however, some 16 percent indicate they might relocate once they or other people feel war has become almost certain. About 50 percent of the sample believe there will not be enough time to evacuate. There is a continuing desire to improve warning technology, and many people are prepared to pay for home warning devices.

Chances of Survival

In past surveys, more than six out of every 10 Americans estimated as bad their chances for survival in the event of nuclear attack. People who live in highly industrialized urban areas estimated their chances as worse than did others. Again, it was the educated respondent, having a high socio-economic status, who was the most pessimistic about his chances of survival.

Even though the basic pattern of response has not substantially altered, even survival odds were seen as somewhat better by the early 1970's than previously. In the 1972 national survey, some five out of 10 Americans thought that survival prospects were "bad" or "very bad" should nuclear war occur "next week" (and another two out of 10 rated their chances as being about 50-50).

Weapons

The percentage of the populace who mention nuclear or thermonuclear weapons spontaneously has been increasing throughout the years; this is to be expected. Spontaneous references to chemical and biological agents are less frequent and represent a distinct minority concern. Nonetheless, when people are asked explicitly about such weapons, they think that such agents might indeed be used; however, there are as many people who do not anticipate their deployment as there are those who do. When asked about their knowledge of chemical and biological weapons, the data suggest that some two out of three Americans know either nothing or very little about them. Thus, there is evidence of public concern about thermonuclear weapons; evidence on concern about chemical and biological devices is not as clear-cut. Without any question, systems to protect lives and property are viewed chiefly as those that must deal with thermonuclear weapons.

Targets

When no opportunity to discriminate among types of attacks or targets is offered, it can be inferred that people generally expect the Nation's cities to be bombed, as well as their own city. Also, people generally expect some cities in their immediate vicinity or in their part of the Country to be subject to an attack. However, given a chance to discriminate between targets, the large majority of the population does not perceive cities and populations as high priority targets. They see military bases, factories, and transportation centers as having much higher priority. This is true regardless of demographic characteristics.

Although the populace generally expect their own city or community to be a target, it was found that people can identify differential risk. Thus, people who live in metropolitan areas perceive more danger than do those in rural areas. Also, once the attack is posited, it is the higher educated and those of high socio-economic status who perceive the greater local danger.

Fallout Hazard

Since about 1956 the populace have become very aware of nuclear fallout over the years. By 1964, it was safe to conclude that fallout was viewed as more of a danger to more people than were immediate effects. However, although fallout is seen as the greatest danger, particularly if one's own city or community is not directly under attack, the populace do not think that much can be done to protect them from it. More than six out of 10 Americans say they could do nothing, or don' know what they could do to protect themselves against fallout radiation even if bombs were dropped on or close to their communities. If directly attacked, people do not believe that much can be done in the way of protection at all.

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Perception of Shelters as a Survival Resource

Most Americans are convinced that shelters would have a reasonable degree of effectiveness. The data indicate that year-by-year, there is an increase in the number of Americans who believe that shelters would provide a reasonable chance to survive an enemy attack. Moreover, people feel that something can be done to provide protection against the secondary effects of thermonuclear warfare. National surveys show that Americans believe fallout shelters can provide such protection, provided they are not in the target area. When queried specifically, Americans were optimistic about their chances of survival in fallout shelters; and some 83 percent regard their chances as being 50-50 to good. They also feel that after surviving fallout radiation, they will be able to cope with the postattack world. In general, variations in survival outlooks seem to relate to general moods of people, i.e., whether they are generally optimistic or pessimistic in their outlook.

Questions were asked about perceptions of shelter living in the 1968 national survey. The data indicate that peoples' perceptions of the nature of shelter living are associated with their willingness to make plans for the use of shelters. An individual's perception of his chances of survival in a fallout shelter is strongly related to his willingness to even think about the actions he would take in a nuclear emergency, including his plans to seek a fallout shelter.

Respondents were asked to imagine what it would be like to live in a shelter. They were then given a series of statements concerning possible conditions, and asked to agree or disagree on the likelihood of each occurring. Respondents perceived a lack of privacy, and hysteria or panic; however, most people also felt some form of organization would emerge and people could get along with each other. Civil defense public information programs could help with family planning on the use of shelters by providing a more realistic image of shelter living.

In the 1978 inquiry, three items were included pertaining to the use of public fallout shelters. One item measured general favorability; the second measured the desirability of using available shelter space in public buildings; and the third postulated fiscal incentives for the inclusion of fallout shelters in buildings constructed by nonprofit organizations, e.g., hospitals, schools, churches, etc. The data document the following conclusions:

- The overall favorability toward public fallout shelters is very high—82.4 percent of the sample so responded.

- Favorability has increased over the years of the 1970's; and the desirability of such shelter space falls between 90.0 and 84.8 percent over the last 15 years.

- The desirability of including shelters in new construction is also extremely high; varying 91.9 to 78.8 percent over the last 15 years.

Home Basement Sharing

The possibility of using home basements to shelter nonresidents has been explored in some detail. The 1968 survey probed the psssible use of home basements as shelters for residents, and quite accurately forecasted the acceptability of such a program to the American public. In the 28 states in which Basement Shelter Surveys were carried out, the mail returns were characterized by a high public response rate (around 80 percent) to such a program.

In both the 1968 and 1972 surveys, questions were asked about the willingness of the respondents to share their basement with others, should it provide adequate protection against fallout. The studies show a great deal of support for such a program. That the results do not reflect only general attitudes which are subsequently not validated by actions is indicated further by studies conducted by Brigham Young University at Colorado Springs. The research coupled here with an actual attempt to get people to allow their basements to be shared shows cooperativeness as high or even higher as the **national** survey revealed. Furthermore, the national results of 1972 also suggest that Americans would be particularly in favor of home basement sharing if it were to become part of an overall **national plan**; and that they would be, in fact, somewhat less receptive to a program which would rely on voluntary arrangements with friends and neighbors. [14]

The 1978 survey once again considered this possibility. Questions were asked not only about the more general desirability of basement surveys, but also about the possible assignment of others to those basements which provide reasonably good fallout protection or which, with relatively modest effort, might be upgradable. As in 1972, we sought to determine how much out people would support the use of basements to shelter nonresidents; how much they believe others in the Nation would let other people use their basements; and how much would they support an actual program of assigning people to basements with sheltering potential. Furthermore, as in 1972, we asked the respondents whose homes included basements whether they, themselves, were likely to allow others to use their basement; whether they would be inclined to permit their home to be marked as shelter; and whether they would permit others to be assigned to their basement by local civil defense officials.

An analysis of ways by which home basement sharing planning might be accomplished (Nehnevajsa . . .) suggests not only that there may be significant gains from home basement sharing in bridging the extant deficits of shelter spaces, but that viable approaches to incorporate home basement shelters into a national system could be developed and implemented. The 1978 survey further confirmed the favorability of public attitudes toward home basement sharing as depicted in Table 6. [15].

Table 6
Attitudes Toward Home Basement Sharing

	Favorable Responses*		Favorableness Index	
	1978	1972	1978	1972
Acceptability of home basement sharing	64.4	61.5	.673	.602
Acceptability to home owners as seen by the respondents	42.9	41.9	.532	.530
Acceptability of assignment of people to home basements	67.0	66.2	.684	.690
Residents with basements:	1978–51.5 percent		1972–49.4 percent	
Allowing others to use one's basement	72.5	75.8	.695	.720
Allowing others to be assigned into one's own basement	72.6	74.8	.684	.702
Allowing home to be marked with appropriate civil defense sign	49.6	59.3	.535	.583

*"Strongly in favor" or "in favor" in response to the general questions; willingness to "definitely" or "probably" permitting the referent action for questions pertaining to respondents with basements (bottom part of table).

The difficulties connected with any effort at organized home basement sharing should not be underestimated. However, the major tone of the data both in 1978 and 1972 as well as, in a somewhat different modality, in 1968 indicates that the Nation's public would be quite supportive of such an effort. Furthermore, the results show that people with basements are positive toward the idea of providing shelter for others, as are people who have no basements.

Blast Shelters

The 1978 survey included three questions about blast shelters. The study sought to ascertain if Americans thought their residential-area fallout shelters would be adequate protection, or if blast shelters needed to be constructed. Secondly, the survey assessed the desirability of a national program to build blast shelters. Finally, the study sought to ascertain perceptions of survival chances if people were in blast shelters rather than fallout shelters. In general, survival likelihood in blast shelters seemed perceived as higher than survivability in fallout shelters or by crisis relocation. This analysis has not progressed to the point where respondents can be defined in terms of whether they live in high risk areas with this limitation the survey found. The following perceptions were yielded by the study:

- 50.3 percent of the respondents thought that blast shelters ought to be constructed in the area in which they live;

- 25.6 percent believed that their area would do with fallout shelters only, while 12.4 percent were unsure about the kind of shelter their area ought to have: they responded "depends";

- the desirability of a national program of blast shelter construction yielded an average of +1.39, with 14.8 percent of the respondents leaning toward the negative end of the response spectrum, and 70.3 percent falling into the positive response categories (40.0 percent actually in the strongest, the +3 desirability bracket);

- further analysis will disclose, of course, how a national blast shelter program would rate in high risk areas as compared with the safer parts of the Country—in other words, the acceptability of blast shelter construction may well be higher (or lower?) in areas most likely to be subjected to a direct attack than in areas which are unlikely to be targeted.

By way of summary, the 1978 national survey provides the following major conclusions:

- The levels of public support for all major alternative in-place systems (public fallout shelters, home basement sharing, blast shelters) are very high.

- The patterns of support in the late 1970's are just about the same as those which were found in the early 1970's.

- Beyond this floor value of high support, public fallout shelters (in existing buildings as well as in the way of shelter incorporation into new construction) are particularly well thought of; but there also exists a rather strongly felt need for shelters against the primary effects of nuclear weapons.

Crisis Relocation

A central purpose of the 1978 national survey was to explore the various dimensions of public attitudes toward crisis relocation. In open-ended questions concerning what actions people might take between becoming quite certain that war was imminent and the actual start of the conflict, some 16.1 percent of the respondents mentioned relocation or evacuation behavior.

To ensure data continuities and to permit comparability with prior surveys, as well as to measure the overall acceptability of evacuating, the respondents were asked about the desirability of a national program to evacuate the major cities and places "near military installations." As far as "crisis relocation" was concerned (that is the contemporary version of "strategic evacuation"), the survey attempted to ascertain several different things.

- It sought to establish how many people would be likely to evacuate spontaneously and where they would go.

- It attempted to determine whether information that the Soviets were evacuating their cities would trigger an outflow of Americans from those areas which the populace consider unsafe.

- It attempted to learn whether the populace believe that relocation plans are, in fact, in existence and whether Americans ought to develop relocation plans, or improve on plans it may be believed, by the respondents, to have already.

- The study attempted to learn how people would respond to a Presidential recommendation or order to evacuate—and, indeed, whether there were perceived circumstances under which the President might be prone to order relocation.

Three specific programmatic aspects were of further interest, inasmuch as their ramifications would impact upon any national planning effort quite considerably. The survey sought to determine whether, in response to a Presidential directive, people would tend to follow instructions regarding their relocation or whether they would prefer to choose where to go, hence complying with the spirit of a Presidential decision but not necessarily in keeping with relocation plans. The study also attempted to learn whether the populace, with the little knowledge of the issue which they currently have, would prefer a relocation concept based on geographic factors (relocation by neighborhood areas) or whether some form of organizational relocation would seem more advantageous.

To establish the Nation's thinking concerning the way in which crisis relocation plans might deal with those workers defined as "essential" and whose efforts would keep the evacuated areas "going", at least in terms of critical activities, the respondents were provided several alternatives and asked to indicate the better, as well as the poorer, ones.

Still other probes in the 1978 survey dealt with resources. In this area, the study attempted to determine what people had available immediately, e.g., food, medication, money, gasoline, possible sites of evacuation, equipment, etc., as well as the kinds of items they would

have to purchase just prior to relocating. The study also focused on helping behavior including whether people would expect to be well received in potential host areas, as well as whether they, in the host role, would be helpful to others. To see whether the populace believe that, if necessary, they could essentially survive just "off the land" for a limited period of time, the survey asked about their self-assessed capability to do so. Finally, to interpret the responses to the various crisis relocation issues and to the expectations, or commitments to, helpfulness, the respondents were asked about their own prior evacuation experiences, if any at all.

A general question concerning "strategic evacuation" had been asked in previous national surveys. It was again asked in the 1978 inquiry for the sake of comparability, as well as to ascertain the meaningfulness of the question to begin with. **Table 7** provides a convenient summary of the results.

Table 7
Desirability of Strategic Evacuation of Communities Near
Military Installations and "Some Large Cities"

	Favorable Responses	Unfavorable Responses	Desirability Index
1978	65.1	16.4	+1.15
1972	57.6	21.2	+0.92
1966	73.8	11.3	+1.64
1964	85.7	9.8	+2.05
1963	82.3	10.2	+1.86

Spontaneous Evacuation

Question concerning the likelihood of evacuating in the midst of an international crisis differ in character from the items asked about actions people would take upon concluding war was imminent. In the latter probe, 16.1 percent opted for moving out of their residential areas in the way of an altogether unsolicited response. In the likelihood question, by raising it explicitly, the study sought to tap a dimension involving a higher information level: as a minimum, information that evacuation or relocation might be an option to consider. It is, in other words, not an action that people somehow have to think up themselves, but in view of discussions about relocation and in light of possible relocation planning, the alternative becomes more visible. Thus, the likelihood question is more isomorphic to a situation in which there exists a national dialogue about relocation or in which, in fact, crisis relocation planning is proceeding.

Table 8 summarizes the 1978 nationwide data along with comparable results from Missouri's 4th Congressional District.

Table 8
Likelihood of Spontaneous Evacuation in a Crisis

	National Study 1978	Missouri Study 1978
Inclined to evacuate*	43.3	50.0
50-50	16.6	9.0
Disinclined to evacuate**	35.4	36.0
Spontaneous evacuation likelihood	0.548	0.552

*Includes those who stated that they would "definitely" or "probably" leave their residential area.

Includes those who said that they would "definitely" or "probably" **not evacuate.

Obviously, the actual flow of world events and the behavior of one's friends and neighbors would have a bearing on any consideration for spontaneous evacuation, as would work-related responsibilities and other structural opportunities or obstacles to evacuating. However, the estimates which the 1978 data yield are high by any standard. If only those who said that they would "definitely" evacuate are taken into account (21.2 percent) as providing a useful planning guideline, the pattern amounts to a massive movement of people; and it is questionable whether even such "spontaneous" movement would not require a great deal of planning to ensure its effectiveness. Thus, "spontaneous" evacuation **could** reach proportions approximating a formally directed crisis relocation; and might well "force" a significant planning effort even were the chances of a Presidentially-ordered relocation negligible.

Now the 60.0 percent of respondents who assigned a likelihood of 50-50 or higher to the possibility of their spontaneous evacuation in the course of a deep international crisis were also asked **where** they might go to and how far. Among these respondents, 32.9 percent stated they would evacuate to a shelter. This represents some 15.4 percent of the total sample; and these are Americans who construe "evacuation" in a way different from what crisis relocation planning might look like. Thus, they view **moving to shelter** as "evacuating," and this, in a narrower sense, is an altogether reasonable perspective. If these respondents are discounted from the "spontaneous evacuation" total, the estimate changes from 60.0 percent to **40.3 percent**—now characterizing those with 50-50 or higher evacuation probabilities **and** planning to leave their residential area altogether. A few additional responses are, from the vantage point of crisis relocation, "maladaptive": of those with 50-50 or higher evacuation chances, 1.6 percent would move to an unsafe place or, at least, a place not safer than that which they might abandon. Discounting these respondents, the overall estimate comes down to 39.3 percent (of the total sample).

A Soviet evacuation, however, would not be seen invariably as a prelude to an inevitable conflict. This is indicated by the fact that spontaneous evacuation likelihood turns

out to be 0.442, with 27.8 percent very likely or likely to leave, and another 24.4 percent estimating the chances as about 50-50 Furthermore, some 40.4 percent of the community people are believed likely to evacuate in response to information that the Soviets are doing so. The results suggest that there would have to be factors other than Soviet evacuation itself to lead to the conviction that war was extremely likely. Since the likelihood of spontaneous movement, high though it remains, is lower than for a postulated crisis (in which a war seems rather certain), it seems that people can conceive of a Soviet evacuation also, in part, as an aspect of other than Soviet-American war scenaria.

Crisis Relocation Plans

Not surprisingly, many people simply do not know whether the Soviets or the U.S. have actual evacuation or relocation plans.

- 39.4 percent were unable to answer the question as to whether the Soviets do have evacuation plans, and another 19.1 percent were "unsure";

- 22.0 percent were unable to say whether the United States has evacuation plans, and an additional 18.6 percent were unsure about this;

- the percentage of those who believe that the Soviets have developed evacuation plans (26.5 percent) is very similar to the percentage of those convinced that America has such plans (26.9 percent).

Survival chances upon evacuation were not seen to be quite as high as the survival likelihood in blast, or even in fallout shelters. Also, many respondents considered the actionable warning time to be quite short; and many felt that there would not be time enough to evacuate even were they inclined to do so. At the same time, there were rather high propensities toward spontaneous evacuation. Should the Nation, then, be preoccupied with crisis relocation planning? The answer is both strong and obvious:

- 78.2 percent of the national and 83.0 percent of the Missouri samples said that the Nation should "definitely" or "probably" have such plans, and another 10.0 percent (national) and 4.3 percent (Missouri) were in the "undecided," or effectively 50-50, response category.

- General favorableness toward crisis relocation planning yields an index of 0.794 for the national sample, and 0.793 for Missouri's 4th Congressional District.

Thus, even though relocation might not seem implementable to many Americans because of time constraints, there exists a strong consensus that relocation planning is both desirable and needed. This, of course, indicates that many of those who feel that there might not be enough time to evacuate are also inclined to believe that there might well exist circumstances

under which relocation would be possible and, therefore, the Nation should be in a position to carry it out.

   But would crisis relocation, even if planned, ever be activated? Respondents were asked whether it was likely that the President might, under any circumstances, actually order large-scale population relocation:

- 66.7 percent were convinced that situations could exist under which the President might ask the populace to evacuate;

- another 9.4 percent were unsure, but did not deny the possibility—as did 17.0 percent of the respondents.

   Clearly, people do not rule out the possibility that the President may order or urge massive population relocation; and, further, they favor national plans to make such an action possible, even though warning time is viewed as something of a constraint on the effectiveness of such measures.

Directed Relocation

   Relocation planning is seen, quite obviously, to be very desirable. Furthermore, there are circumstances under which the President is perceived likely to ask the populace to relocate. The data in Table 9 show, for the national and Missouri samples, the likely patterns of compliance should the President, in fact, order or urge relocation.

Table 9
Likelihood Of Directed Relocation
In Compliance With Presidential Action

	National Survey 1978	Missouri Survey 1978
Likely to relocate*	70.2	69.7
50-50	15.2	11.0
Unlikely to relocate**	12.4	12.3
Likelihood index	0.717	0.715

*Includes those who would "definitely" or "probably" relocate.
**Includes those who would "definitely" or "probably" not relocate.

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Only 4.9 percent of all respondents in the national sample said they would **definitely not relocate** even should the President urge the Nation to do so. But these are, in any event, aggregate data: some of the respondents live in "safer" areas of the Country and, therefore, would not be expected to relocate anyway. Further analysis will show the pattern of compliance with a Presidential directive in those areas which would be at-risk and from which, in fact, people might be asked to leave. Asked about the percentage of area people who would follow a Presidential recommendation to relocate, the respondents yield was an average of **69.1 percent.** Thus, if their own likelihood index is 0.717, an estimate of how others in their communities might act produces a similar value (0.691): 61.5 percent of the respondents would follow instructions as to "where to go," while 27.5 percent would "want to evacuate to a place of their own choice." The remaining 11.0 percent did not know whether they would prefer to follow instructions or not—a percentage which certainly includes most of those who had decided not to relocate at all.

Why might some people not relocate at all? The question was asked of all respondents in the way of an open-ended probe so that an assessment could be made concerning how people "feel" about the main factors which would serve as a disincentive to relocation, even if asked for by the President.

- 36.3 percent of all respondents suggested predominantly **ideological reasons** for noncompliance.

- 23.0 percent thought that the desire to protect one's property or area would be the main reason for unwillingness to relocate.

- 9.1 percent believed themselves in a safe area.

- 9.1 percent felt that "age" is a key factor in noncompliance.

- 6.5 percent were convinced they would have " no where to go," while 3.9 percent cited health reasons.

It is important to emphasize that these attributed reasons for non-relocation amount to expressions about the underlying rationale for noncompliance on the part of all respondents, including the vast majority of those who would actually relocate. Further analysis will show how these reasons apply to those who have just about decided to stay put.

Critical Workers

To find out what might be the most acceptable way to deal with the relocation problems of "critical workers," the respondents were provided with a brief explanation:

> In the evacuated areas, some essential services may have to continue.
> For example, policing, firefighting, some of the main utilities, some
> of the major industrial activities, and the like. Some people then
> would have to be designated as critical workers because their occu-
> pations would be essential even if there were large scale relocation
> of people.

The respondents were given a list of five major options and asked to identify the "best," "second best," "worst," and "next worst" ones. The results lead to a rather clear rank-ordering of the alternatives. The data are presented in Table 10.

Table 10
Relocation Planning For Critical Workers

	Best Or Next Best Alternative	Worst Or Next Worst Alternative
Evacuating families of critical workers only; urging such workers to maintain essential services and providing full protection for them both against blast and against fallout.	54.0	23.4
Evacuating workers and families; having critical workers commute.	44.1	32.4
Evacuating families only; urging workers to stay and maintain essential services and evacuating them at the very last m moment before an attack.	42.8	31.0
Urging workers and families to stay and providing full protection for them and their families (in-place).	30.9	44.7
Urging workers and families to stay and evacuating them at the very last moment.	19.6	57.9

How potential "critical workers" themselves might feel about the matter is, at this time, unclear; however, identifying at least some of the major occupational pursuits which would clearly fall into the critical-worker category and those which would, with somewhat similar clarity, not be so "classifiable" is possible. Identification will reveal how receptive or non-receptive the critical workers themselves would be to the various alternatives.

The idea of evacuating family members only, while urging designated essential workers to remain and providing protection against both blast and fallout for them emerges as, by far, the preferred modality. But all the options are quite controversial, even those three which more Americans favor than disfavor. Thus, what ought to be done about essential workers and their families is likely to result in a significant controversy, with possible (negative) spillover effects

for the overall concepts of crisis relocation planning. The point is that none of the postulated alternatives prove to be relatively non-problematic from the vantage point of the Nation's body politic. Actually, if the focus is only on the "best" and "worst" alternatives, the idea of relocating everyone and having the essential workers commute to maintain the required services in the depopulated risk areas has higher acceptance and lower opposition than any of the remaining options.

The survey also attempted to ascertain the need for certain resources such as availability of a relocation place and necessary equipment to get there. The results are in Table 11.

Table 11
Availability Of Places And Equipment
Which Might Facilitate Relocation

	Percent
A car or cars	87.8
Friends or relatives to stay with within 100 miles	58.1
Friends or relatives to stay with within 200 miles	54.6
Camping equipment	33.0
Campsite or a similar place within 100 miles	20.6
A camper or similar equipment	20.1
A campsite or similar place within 200 miles	19.4
A boat	12.5
A cottage, summer home within 100 miles	6.2
A cottage, summer home within 200 miles	4.7

The percentages of people with friends or relatives with whom they claim they could stay are quite impressive, both when a 100-mile and a 200-mile radius are considered. The result is even more promising since it was made clear in the wording of the question that these ought to be "friends" or "relatives" within the specified radius but not living in another city area.

Some 88.0 percent of the respondents have at least one car; in fact, 47.3 percent of the sample have two or more cars. At the time of the interview, the car which the respondents considered to be the "principal" family car was generally between one-half and three-quarters full of fuel. Only 4.1 percent of the respondents (4.7 percent of those with cars) said that the tank was either quite empty or almost empty; and 23.4 percent of the car owners reported to have an essentially full tank.

- On the average, the car owners thought they could drive for about 162 miles without having to refill their tank if they had to leave "right away."

- The median, which splits the distribution into those with higher and lower mileage estimates, amounts to 150 miles without the need for refueling.

But, how about people without cars?

- 69.5 percent of residents without cars were sure they could rely on friends, neighbors, or relatives to take them along in their cars should the need arise to evacuate; while

- 30.5 percent of them would have to rely on public transportation of some kind.

Food supplies, too, do not appear to be an unsurmountable problem. Asked for how long people could "make do" with the food items on hand if they had to leave their home right away, only 9.4 percent of all residents thought they could not last for three days or more.

- On the average, the respondents claimed they could manage with the food supplies on hand for about 22 days.

- However, the median turned out to be 13.5 days—just about a fortnight, so that about one-half of the respondents would have enough foodstuffs immediately available for more than about 14 days, and the other one-half for less than 14 days (but most of them for three days or more).

In a similar manner, the survey probed about the family need for drugs and medicines, and how long the supply on hand would last.

- 31.7 percent of the respondents said they, or other family member(s), were in regular need of medication.

- The supplies on hand, without the need to acquire additional drugs, would last on the average of about 37 days (with a median of about 30 days, about one month).

- Only 2.8 percent of those in need of regular medication did not have enough drugs or medicines on hand to last for three days or more.

The survey asked also what other significant items, apart from food or medicines, people might take along if they had to relocate; and which of such items, if any at all, would have to be purchased before leaving.

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- Clothing items were mentioned by 72.6 percent of the respondents.

- 36.7 percent mentioned bedding or night clothing specifically.

- 19.1 percent would take along selected "family" items and valuables.

- 11.0 percent specifically mentioned portable TV or transistor radios.

- 10.3 percent would take along camping equipment, and 4.4 percent referred to kitchen utensils.

- 8.3 percent would carry with them various medical and health-aid accessories.

- 7.3 percent would take along guns and/or fishing equipment.

Such items as tools (2.4 percent), water (2.8 percent), or batteries (2.5 percent) were mentioned only infrequently in this general context.

Pets

Some 50.7 percent of the respondents reported having pets around the house. Dogs were found in 29.1 percent of all households, dogs as well as cats in 9.0 percent, and cats in 8.9 percent of the homes; an additional 2.6 percent had pets other than cats or dogs or both.

- 76.7 percent of Americans who have pets around the house would plan to take them along if they had to evacuate.

- 12.9 percent said that it "depended" on the circumstances.

Of the national sample, this implies that 37.8 percent would be very likely to relocate along with their pets, and another 6.4 percent might well be inclined to do so depending on the situation.

In all then, crisis relocation is not merely a massive movement of people, but also a rather major movement of household pets. This alone cannot but have an impact on the nature of the host area preparedness needs, including the various housing options for the relocatees.

Helpfulness

The questions regarding the Nation's probable response to a massive flow of relocatees tap several different, but complementary, dimensions:

- How helpful would the Nation's communities be if they were to receive evacuees?

- Specifically, how helpful would people be in the rural hinterlands of the Country, should the crisis relocation program stress a movement into rural America—that is, how helpful might farmers prove to be?

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- How helpful would people be in the respondent's community itself, should it be a host rather than a relocation site?

- To what extent would it seem likely that people in host communities around the Nation would actually be willing to accommodate the relocatees in their own homes?

- To what extent would the respondent's own community prove hospitable for relocatees, should it serve as a host area?

- To what extent would the respondent be likely to provide housing for relocatees and, if so, how many families might be hosted in this manner?

- Finally, what are the main reasons why some people might be unable or unwilling to house relocatees—a question asked only of those who said they would "definitely" or "probably" not be in a position to accommodate any relocatees in their place of residence.

The results, presented in summary fashion in Table 12, leave little doubt: there exist very high expectations of altruistic behavior throughout the Nation; this finding is further strengthened by the conviction that the respondent's own community might be even somewhat more willing to help than other communities across the face of America. It is also of considerable importance to note that a possible relocation into rural America—either exclusively or predominantly so—is in no way seen as being jeopardized by perceived attitudes of the Nation's farmers. If anything, they are considered to be even more supportive than are other possible host communities, and almost as supportive as are the municipalities in which the survey respondents themselves resided.

Table 12
Likelihood Of Relocatee Accommodations In Private Homes

	Likely*	Unlikely**	Likelihood Index
Willingness in host areas to have relocatees stay in private homes.	65.9	13.1	0.668
Willingness of people in the respondent's community to house house relocatees	64.0	14.5	0.657
Willingness of the respondent to provide accommodations for relocatees	72.6	9.2	0.751

*"Definitely yes" or "probably yes."
**"Probably no" or "definitely no."

Those who were either likely to accept relocatees in their own homes or who responded with a 50-50 likelihood were also asked about the numbers of families they might be willing to take in:

- 50.0 percent of them (39.3 percent of the total sample) would be willing to accept one relocatee family.

- 31.0 percent (or 24.4 percent of the total sample) might accommodate two families.

- 7.6 percent would be willing to house three to five families.

- 11.4 percent mentioned six or more families they might be willing to have stay with them.

Nor do these feelings appear to be unfounded in actual experiences: 38.2 percent of the sampled respondents claim to have lived, for some time, on a farm or in a community with fewer than 2,500 people; and 43.1 percent lived in communities of 2,5000 to 10,000 residents—both questions having been asked only of current residents of larger towns and of city dwellers.

Not only are the Nation's host areas seen as quite receptive to the flows of eventual relocatees, the data presented in Table 13 also show a rather high likelihood that the relocatees would be in private homes.

Table 13
Helpfulness Of Host Communities

	Positive Responses*	Negative Responses**	Helpfulness Index
Helpfulness of the Nation's communities to receive and aid relocatees	75.3	11.6	0.732
Helpfulness of the Nation's farmers and other rural residents	79.1	7.7	0.740
Helpfulness to evacuees of people in the respondent's own community, should it be a host area	81.9	9.2	0.771

*"Very helpful" or "helpful."
**"Unhelpful" or "very unhelpful."

As optimistic as the respondents are in general, they are personally even more inclined to say they would house relocatees than is believed to be the case throughout their own communities or throughout other communities around the Nation. Even if some proportion of the helpful intentions were not, in a crisis, actualized (though it is, in principle, more likely that actual cooperativeness would exceed the current, normalcy-baced intentions rather than the opposite), the findings are so strong as to suggest that much of the housing problem of the large numbers of relocatees would indeed be "solved" by willing, perhaps even eager, cooperation of people in the host areas.

Living "Off The Land"

People expect farmers and other rural inhabitants of the Nation to be extremely cooperative should the flow of relocatees be directed primarily into the Nation's hinterlands. The survey sought to determine whether people believe that they, and their families, could survive for "a couple of weeks" in the countryside, even if they were unable to "stay at someone's farm or house." The survey indicates the following:

- 72.2 percent of the respondents thought they could "definitely" or "probably" manage "for a couple of weeks" under such extreme circumstances, while

- 15.6 percent "probably" or "definitely" could not manage the circumstances, and an additional 8.3 percent were unsure about their ability to deal with the postulated situation.

Whatever else may be said, more than seven out of 10 Americans have an image of themselves and of their family as quite capable of "roughing it," if need be, even for "a couple of weeks" and thus, implicitly, "make do" with the barest essentials.

Evacuation Experiences

In the 1978 sample, 12.2 percent of the respondents reported prior experiences with evacuation. Various storms (specifically mentioned or unspecified) were cited most often as the trigger for evacuation (30.4 percent of all who did evacuate previously), while fires were the second most frequent single factor (18.5 percent).

- On the average, such evacuations involved a move over some 9.2 miles, with a median at 3.0 miles.

- On the average, the evacuation experience lasted 12.5 days, with a median of 2.6 days.

In turn, 11.4 percent of the respondents provided temporary housing for other evacuees. Again, major storms were the main reason for this need for temporary housing (32.9 percent of those who provided a temporary refuge mentioned such storms) as were fires (23.5 percent), floods (18.4 percent), or major power outages (6.7 percent).

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The resulting experiences (69.8 percent of which have occurred since 1965—with almost one-half of those dated in 1975 and more recently) were mainly quite positive. In 64.3 percent of the instances, the experience was rated favorably by those who did help house evacuees in need—but, of course, this also means that some 35.7 percent of the reported experiences were less than positive. Some clearly mixed feelings, however, must be involved here since only 48.0 percent of those with hosting experience (which, to repeat, characterized 11.4 percent of the sample) were willing to say whether the experience was, for the most part, a positive or a negative one.

Exposure To Disasters

It seemed altogether logical to argue that people who have had direct experiences with various major disasters may have a different perspective on emergency preparedness systems, including a system for civil defense, than might people without such prior encounters. For this reason, the 1978 study included several specific questions: whether the respondents had ever had an experience with a tornado, hurricane, flood or earthquake; how it affected them; was the experience "close" to them, i.e., did it impact on them personally, or primarily on their friends or neighbors, or on their residential area?

Beyond the questions about specific disaster experiences—floods, hurricanes, tornadoes, and earthquakes—the survey attempted to focus on other major exposures to emergencies; hence, the 1978 study respondents were also asked about disasters other than those specifically focused upon. The results were as follows:

- In the sample as a whole, 20.8 percent of the respondents claimed experience with a tornado.

- The overall exposure rate to hurricanes was 21.8 percent.

- Experiences with major floods were reported by 17.9 percent of the respondents.

- Exposure to an earthquake was referred to by 16.1 percent of the respondents.

In all, 11.7 percent of the respondents reported disasters other than those about which they were specifically asked (floods, hurricanes, tornadoes, and earthquakes). And a very few of them mentioned two or even three emergencies which they recalled.

The data indicate a fair, indeed quite non-negligible, amount of exposure to various mass-emergency situations. The experiences are, of course, location-specific; but when mentioned, they seem to have led to relatively serious impacts by way of damage or injury and tended to reflect personal and family experiences, for the most part, rather than just contextual, i.e., community, area, exposure. About one-half of the reported experiences have a 1960 or post-1960 date, and the most recent experiences (those of the 1970's and, especially, since 1975), seem to appear most frequently. Only further analysis of the relation of these exposures to disasters and the age

composition of the sample can tell us whether or not recall factors or, mainly, objective age itself played a significant role in the manner in which the respondents reported the pattern of their past experiences. Further analysis will also show the extent to which such disaster experiences color the feelings of the respondents regarding the need or necessity for various measures of civil defense; or how, if at all, these traumatic events of the past might sensitize the populace differently in their evaluation of possible threats.

Cost Financing

It is clearly seen that Americans find public fallout shelters desirable, and the provision of such shelters is regarded as essentially a Federal responsibility. In many respects, the public think of civil defense in much the same manner as they do military defense: Community and State sponsored shelter systems receive considerable support, but federally sponsored programs are the most popular. [16]

In terms of the level of expenditure, the public seem generally to support rather extensive programs and, definitely do not regard even elaborate public shelter proposals as "wasteful." Interestingly, a 1963 national survey found that the public think civil defense is doing and spending substantially more than it actually is; and the public's preferred level of annual spending is considerably higher than even their inflated estimate of what is currently being spent.

In the 1968 and 1972 national survey, an attempt was made to assess attitudes about the level of expenditure for civil defense since only the 1963 survey had dealt with this issue. About one-third of the respondents felt the amount spent on civil defense was "about right," another one-third felt it was "much too little," and only one in 10 felt "too much money" was being spent. This is by no means to imply that public opinion has any direct bearing on the realities of budgets and the worth of program expenditures, but it does give some idea of the opinion environment in which such expenditures can be proposed and made.

The 1972 survey indicates respondents think the Country is spending roughly about 10 times as much on civil defense as it actually has been in recent years. The public's views (though 35.2 percent simply do not know) favor a $1.2 billion program. Roughly, again, this is about 15 times the approximate 1971 expenditure pattern; and it is some 67 percent over what people think is being spent. The finding that civil defense, for instance, ought to get more money (a $1.2 billion program) is supported by, and also interactively supports, the favorable attitudes toward civil defense which are so characteristic of the population.

The 1972 national sample asked people to estimate how much America has been spending on civil defense programs, and to state how much ought to be spent. To be sure that the item is comparable in its basic meaning to other patterns of expenditures, the same questions were asked about anti-poverty programs, ABM defenses, and foreign aid. In fact, the questions

about then-current expenditures were asked first, and the probes into desirable levels of funding followed. To be sure that numbers in hundreds of millions of dollars or, for that matter, billions of dollars did not confuse most of the people whose [money] arithmetic is limited by their own budget experiences, the respondents were given a simple card in which the aggregate amounts were also expressed in approximate expenditures, i.e., in dollars and cents per person.

Since an ABM limitations treaty was signed between the United States and the Soviet Union shortly after the completion of the 1972 study and since it has remained, for all practical purposes, in effect, the 1978 survey repeated the cost questions concerning anti-poverty programs, foreign aid and civil defense but not the ABM defenses' item. **Table 14** contains a summary of both the 1972 and the 1978 data.

Table 14
Average and Median Current and Desired Levels of Expenditure

	AVERAGES			
	1978		1972	
Programs	Current	Desired	Current	Desired
		In Millions of Dollars		
Foreign aid	2,891.4	676.7	3,133.1	865.4
Anti-poverty programs	1,883.6	1,731.1	1,665.0	2,405.8
Civil defense	1,028.8	1,618.6	789.0	1,243.1
	MEDIANS			
Foreign aid	1,041.8	79.7	1,177.0	119.0
Anti-poverty programs	358.5	249.6	331.3	450.1
Civil defense	117.8	252.5	51.2	177.1

The 1978 results, in terms of average expenditures, suggest:

- Major cutbacks in foreign aid spending, a result paralleling that of the 1972 study.

- Essentially holding the line on anti-poverty programs, the expenditures for which the 1972 sample sought to increase by a factor of about 1.4.

- Increasing the expenditures on the civil defense program by a factor of about 1.5 (and by a factor of about 1.6 in the 1972 study).

Furthermore, the current average expenditures on civil defense efforts are overestimated by a factor of almost 10 (the overestimation in 1972 was by a factor of about seven), so that the more desirable level of spending, relative to the approximate budget of $100 million, represents a 15-fold increase (14-fold in 1972) over "actual" 1978 spending.

The median is, in this regard, a much more conservative measure, unaffected as it is by extreme values in the overall distribution. For the civil defense program, it amounts to an estimation of expenditures "roughly" similar to the actual ones, but a **doubling** of desirable investments (from about $118 million to over $242 million annually).

Many respondents, however, make no claim to knowing what the Nation has been spending nor do they try to say how much money ought to be spent: but there are significantly fewer non-estimators in the 1978 study than in the 1972 study.

In light of these data, so strongly paralleling the 1972 results, it would be hard to imagine that the Nation might somehow object to an increase in civil defense budgets since even the most likely budgetary increases would not even reach levels of funding which people already believe to be in use. Thus, the argument that a sharp increase (say, doubling or even tripling the current budget) in civil defense spending would somehow signal people to worry more about the chances of nuclear war or would be seen as wasteful is not really tenable.

The concern over the possibility of war is there. A national dialogue about civil defense expenditures would, if anything, make our people realize how low the spending level has been when compared with what they, themselves, believe it to be and, even more so, believe it ought to be.

Information Level

The 1978 national survey was not designed to measure the information level of the public about civil preparedness issues and content. It did, however, ask respondents to evaluate, in a most general manner, their own assessment of level of knowledge about civil defense. Because media coverage of civil defense issues was higher in 1978 than in recent years, the survey probed exposure of the public to media materials about the program. Since the increased media interest might also have some effect on the extent to which matters of civil defense enter into discussions and conversations, the study assessed whether civil defense issues had become a topic of recent conversations and with whom. In **Table 15**, the information level indices are summarized.

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Table 15
Information Level: Respondent Self-Evaluations

	Percent		
	Very Low* Information	Very High** Information	Information† Index
U. S. economy	10.0	22.1	5.57
Energy situation	11.4	21.4	5.43
General world situation	12.8	17.0	5.10
National defense	22.8	10.1	4.27
Soviet Union	35.0	7.3	3.56
Civil defense	35.2	6.4	3.43

*"Very low information" includes scale values 0-2.
**"Very high information" includes scale values 3-10.
†The index range lies between 0 and 10 for zero information to maximum respectively.

As evidenced by the data in Table 15, civil defense yeidls the lowest information level score; thus, respondents tend to admit in large numbers that they know very little about the Nation's civil defense (as well as about the Soviet Union in general), and not much at all about the national defense picture.

Coupled with the frequent desire to be trained and educated in know-how and the problems of mass emergencies, including the hazards of nuclear war, and with the strong willingness to offer voluntary services on behalf of a civil defense program, the potential receptivity to upgrading the national information level is quite high; and considerable efforts could be readily ascertained because of the low level of the informational base line.

Asked about noticing anything at all in the Nation's mass media about civil defense in "recent months," 19.6 percent of the respondents recalled such exposures as follows:

- 8.6 percent mentioned television.

- 6.9 percent were unable to refer to a more specific information source.

- 4.9 cited the printed media.

- 2.2 percent heard something about civil defense on the radio.

Even though, objectively, 1978 marked increased media coverage of civil defense issues and about 20 percent of the sampled Americans recalled some recent exposure(s) to media information, there

has been little in the way of discussion or conversation. It is, of course, quite correct to argue that controversial subjects or subject matters at controversial times tend to stimulate communication. The data show that, for the most part, civil defense is not seen as controversial by the public in that there exists strong consensus on its positive value. This alone might make it less of an "interesting" topic for discussion, except—as the data from the Cuban crisis period indicate—under exceptional international circumstances when there is concern with obtaining usable crisis-response information.

- 3.9 percent of the 1978 respondents reported having discussed various aspects of civil defense with their friends.

- 3.7 percent held such recent discussions with members of their family, and 1.4 percent with relatives other than immediate family members.

- 2.8 percent recalled having talked about civil defense with co-workers, and 1.9 percent with neighbors.

- 2.2 percent were sure that they did discuss civil defense issues in recent months, but were unable, or possibly unwilling, to identify the human context of the conversation.

Information Seekers

Public attentiveness to civil defense tends to rise during periods of acute international crisis, then ebb again when the crisis eases. This low attentiveness to civil defense messages during periods of calm is a major constraining factor in achieving public readiness for operations. During periods of crisis, a widespread public information seeking activity is observed at all levels of civil defense. Research conducted in Detroit, Michigan, was designed to define the nature of the information diffusers during crisis periods: 77 persons who sought information during the Cuban crisis were compared with 200 adults selected at random.[17]

The findings from this study suggest that special attention to this audience may be warranted. These "information seekers" perform key communication roles in the groups of which they are a part. They perform an inter-personal communication role and, hence, are more likely to be asked for their opinion and to seek information from others in their groups. They are better informed about major news events, and are active in social organizations where they tend to hold key roles. These persons are found in most segments of the population; and information provided to them will reach all segments of the population. For civil defenses purposes, information seekers should be considered as part of the media channel to the general public. We should prepare information for their use in crises similar to that of other media.

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Training Acceptance and Impact

Since the inception of the DCPA Training and Education Program, 29,833,500 people have received instruction and training in various civil defense courses. The Program supports civil defense activities nationwide at all levels of government, and provides instruction and training to civil defense officials, instructors, and others who need training in the skills with which to cope with emergencies. Such courses are: civil defense education courses to the public; conferences for officials and business and industry personnel; emergency operations simulations, plans, and operations; civil defense management; and radiological defense. Instructor training includes radiological monitoring and shelter monitoring.

In the 1968 national survey, respondents were asked to evaluate the importance of government programs training persons in emergency work for use in the event of an attack.

- 86 percent saw the training as important, or very important.

- 71 percent of the respondents indicated they were favorably disposed to participate in at least one civil defense training program.

In surveys relating to acceptance of the Home Fallout Protection Program and Community Shelter Planning, questions about participation in training programs were asked. The results were as follows: [18]

- 14.5 percent of the respondents participated in civil defense training programs.

- Of those who participated, about 25 percent had enrolled in more than one training program.

- An additional 25 percent had participated in from three to eight courses.

A rather interesting aspect of these data is the number who participated in more than one course. For example, 50 percent participated in at least one course; the remaining 50 percent participated in more than one course.

A major conclusion to be drawn from these studies is the likelihood that there is an identifiable audience of persons receptive to civil defense messages, including training effort. Exposure to training strongly affects disposition of response to civil defense programs. This response-trained audience is composed of potential civil defense influentials, and might be a useful target for additional public information input.

The 1978 survey asked respondents about training experience in such areas as first aid, radiological monitoring, shelter management, and other emergency training programs. The study also asked about the organizations which provide such training. The results are presented in the following Table 16.

Table 16
Training Claims of Respondents and Those Pertaining to
Other Members of the Households

	Respondents	Other Household Member(s)*
First aid	42.2	27.7
General emergency related actions	13.7	5.5
What to do in a nuclear attack	13.0	5.1
Radiological monitoring	6.3	2.7
Shelter management	4.6	2.6

*As reported by the respondents.

As evidenced by reports of the respondents themselves, (some) first aid training is by far the most frequently reported and is also more likely to have been experienced by other members of the household. The schools, the Red Cross, the military, and industrial firms are most often cited as the organizations which helped the respondents, as well as other household members, to acquire some first aid know-how.

With regard to other training, e.g., general emergency training, radiological monitoring, shelter management, how to act in the event of a nuclear attack, the military, the schools, and civil defense—in that order—were the most frequently mentioned organizations responsible for the delivery of the training service. In terms of shelter management, civil defense programs are mentioned more often than are schools concerning the respondent's training; however, the reverse is true for training another member of the household: the pattern is similar when it comes to radiological monitoring. Table 17 provides data concerning the favorableness response index for respondents.

Table 17
Interest In Disaster-Related Training

	Favorable Responses	Unfavorable Responses	Favorableness Index
Respondent willingness	59.5	19.3	0.650
Willingness attributed by res respondents to other household member(s)	42.4	13.8	0.637
Willingness to see disaster-related programs in the curricula of public schools	93.9	3.2	0.891

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These data show the Nation is nearly unanimous about the desirability, and appropriateness, of exposing school-age Americans to information which would enable them to cope with emergencies more effectively; nor did the wording of the question leave any doubt that a "nuclear war" was one such specific emergency. There is also a strong interest in the adult public to acquire disaster-relevant training or education. In all, there exists strong eagerness to learn more about emergency-related problems and actions. Prudent educational and training programs could easily capitalize on the prevailing disposition of the Nation's public.

Volunteering

There is no doubt that the worried tend to think about and volunteer for civil defense more than those who express no worry. There is also no doubt, based on the early Michigan studies, that those people who have a realistic notion of weapons effects and who do believe their city to be a target tend to have a more constructive response to threat. They also tend to volunteer more readily than those with exaggerated estimates of bomb effects. The nuclear threat per se, except for the above mentioned tendencies, has little or no affect on people's plans for the future. This may be because it is too abstract a notion for most. When the threat becomes more specific, such as during the Cuban crisis, there is the expected but slight increase in protective behavior. However, the general tendency is to feel that there is very little one can do in the face of a nuclear threat. [19]

In the 1972 national survey, data were gathered across a range of issues dealing with willingness to volunteer for civil defense. Some 54.2 percent of respondents in the 1972 national study stated they would "definitely" or "probably" volunteer for civil defense should there be a need for volunteers and a call for their help made. In general, people who see the world environment as more threatening tend to volunteer more than people who do not see it that way. People who believe that the survival chance would be 50-50 or better, even if hostilities were to be initiated "next week," are much more likely to volunteer than those who are more pessimistic about the odds of survival.

The 1978 survey gathered attitude data about volunteer service generally, and the willingness to volunteer for civil preparedness programs. Some 30.8 percent of the respondents engaged in some voluntary activity in the year preceding the study. Willingness to volunteer for the civil preparedness effort was very high.

- 61.7 percent of the respondents said they would "definitely" or "probably" volunteer for civil defense programs if the occasion arose—a finding which produces volunteer willingness aggregate index of 0.616.

- The finding is supported by 1972 data: 54.1 percent expressed their willingness to volunteer, and the corresponding index was 0.581.

The survey certainly does not find that it would be difficult, should it also prove desirable in light of the various program needs, to mobilize significant numbers of civil defense volunteers.

As with all other voluntary involvements, continued participation would then depend on the individual's perception of the meaningfulness of the activities, as well as on the flexibility with which he could allocate his time on days and at hours compatible with his lifestyle. In general, the problem would then be what to do with volunteers in order to reap the most benefit from their time and effort, rather than whether Americans might be willing to participate.

Special Audiences—Volunteer Organizations

Another part of the social environment of civil defense is a group of subsystems called voluntary organizations. Most of these organizations have vertical channels of communication which reach to the Federal level, and many engage in some form of social change programs. Voluntary organizations have been a target audience for various civil defense communications efforts in the past, and their usefulness has been a continuing subject of discussion in civil defense.[20]

Knowledge about civil defense use of voluntary organizations has been pulled together in three reports. These studies include assessments of the way voluntary organizations function to tie the community together, as well as assessments of the role they have played in civil defense and other action programs.

A review of experience with volunteerism demonstrates some of the major constraints in organizing an army of volunteers for civil defense. In the absence of a clear and present danger, the reliance on volunteers for the key staff of the program results in unevenness in the level of participation and quality of task performance. To be effective, civil defnese programs must be carried out on a relatively uniform basis. In such a program, volunteers cannot be used as decision-makers. The remaining rank and file role is not as interesting to activists desirous of exercising social power through voluntary efforts. The lack of saliency in civil defense is a major constraint on widespread volunteerism. This does not preclude the use of voluntary efforts on a limited task basis. Studies have indicated very successful use of volunteer efforts in promoting local civil defense efforts such as educational exhibits, community shelter plans, etc.

One study demonstrated the linkage in membership of voluntary associations at the community level. In one local community with about 2300 adult women, 43 percent were members of 39 voluntary organizations. Within this group of 990 women, about 63 women held six or more memberships each. As a source of interpersonal communication and influence, these 63 members could reach most of the community through direct interpersonal communication. By selectively enrolling individual women and organizations in her program, the local director can maximize secondary contact with all voluntary organizations.

Other studies identified the extent of volunteerism in American society. Volunteer associations are a source of considerable social influence in America; and while civil defense may not be able to enroll volunteers on a massive basis, the selected use of voluntary associations for limited missions is an effective way of communicating with the public.

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Special Audiences—Youth

Of the special types of audiences for civil defense public information programs, youth are recognized as important since they have lived their entire lives in the atomic era and should have favorable predispositions toward the civil preparedness programs. Their views about civil preparedness countermeasure systems are important because: (1) they are forming attitudes toward many public issues including civil defense which will remain relatively stable over the rest of their lives, (2) by comparing their views with those of the adult population, DCPA can gain insights about the likely feasibility and acceptance of future programs. [21]

Two studies of youth, addressed largely to problem definitions, have been completed. In the 1966 study, 327 eight and twelfth graders were asked to write an extemporaneous essay on "What I Know About Fallout Shelters." Trained coders analyzed these essays for information about the person who wrote it and the degree of favorability expressed toward (1) shelters generally, (2) family shelters, (3) public community shelters, and (4) civil defense in general. The findings indicated general favorability toward civil defense, fallout shelters, and both public and private fallout shelters. About 80 percent of all statements coded were classified as more positive than negative. The more significant aspects of the study resulted from further analysis of the social and demographic characteristics of the response. Concerning age differences, eighth graders were more favorable than twelfth graders. There was little difference between sexes and social classes.

The 1968 study gathered information about 400 teenagers from two school systems in Maine. One school had an active civil defense program with teachers participating in the adult education program. The objective of the study was to determine differences between two groups of teenagers in terms of civil defense information and attitudes, where one group was exposed to an intensive in-school civil defense program and the other was not and, in addition, to determine the difference in information and attitudes existing between older and younger teenagers. Some of the major differences between those exposed and not exposed to the civil defense program include:

- having heard more about public fallout shelters from teachers and civil defense people and having read more about fallout shelters in magazines;

- mentioning government pamphlets, teachers, school programs, and civil defense people as their most useful sources of information—those without such a school program cited radio and television as most useful;

- knowing more accurate information about civil defense and fallout shelters—87 percent of those receiving in-school training could correctly identify the black and yellow fallout shelter sign as compared to 58 percent of the students without such a program; furthermore, in a six-item test of civil defense knowledge, the former were significantly more knowledgeable; and

- telling others something about fallout shelters of civil defense was related to exposure to the in-school program.

In addition, little difference was found in overall attitudes toward civil defense between the two schools; both held similar perceptions of shelter protection and living conditions; and the effects of the in-school training were very apparent.

Special Audiences—Community Power Structure

Another important element in the social environment of civil defense is the community power structure. Successful efforts to create social change within a social system depend on the appropriate involvement of numerous persons performing many roles within the civil defense social change intrusion area. The findings, generalizations, implications, and procedures for identifying power actors are useful to civil defense change agents in developing strategies to initiate and sustain social change. In the five study communities, the research identified (1) the personal and social characteristics of power actors; (2) the relationship of civil defense power structure to the power structure in other non-civil defense issue areas; and (3) the power actors' civil defense attitudes, knowledge, sources of information and actions. [22]

The power actors in the five communities studied had similar personal and social characteristics. They were perceived as having social power in the civil defense issue area by members of the community. The power actors' civil defense attitudes, knowledge, sources of information and actions were analyzed. The power actors:

- had a low perception of threat,

- favored a civil defense program,

- perceived both Federal and local civil defense programs as inadequate,

- perceived that they (the power actors) had a civil defense responsibility, and

- lacked knowledge about civil defense.

The three most frequently named sources of civil defense information were:

- daily or weekly newspapers,

- television news, and

- special programs involved in civil defense in their communities.

These studies provided new insights about social power and a profile of community influentials' civil defense attitudes, knowledge, sources of information and actions. These data are useful in planning civil defense programs and in civil defense training efforts.

Special Audience—Local Government Bodies

This study was one of several which attempted to look at the local director's environment and analyze how it affects program implementation. It considered the roles of local government involving elected officials—county board members and mayors. The role of the local civil defense director was also studied. These three roles are considered to be among the most important decision-making and action roles relative to civil defense change induction programs.[23]

Local government officials have certain attributes (characteristics) which affect the civil defense system. One such is their authority to make decisions which may affect the implementation of civil defense programs at the local level. Another attribute is the ability of some local government officials to give or withhold legitimation (approval) of action programs. If local elected officials hold favorable attitudes toward civil defense, they are generally in a position to facilitate civil defense action programs. On the other hand, if their attitudes are unfavorable, they can place constraints (coercions and pressures) upon the civil defense systems which may handicap such programs.

A further reason for taking local elected officials into account is the influence they may have upon the effectiveness of local civil defense directors. Local civil defense directors are appointed by local elected officials. These elected officials maintain a certain amount of control over them. Local elected officials may define, to some extent, the responsibilities (role expectations) of local civil defense directors. The directors, in turn, may define their own responsibilities. It is possible that local elected officials and local civil defense directors might disagree as to what is the definition of the director's role responsibilities. High consensus may be important if the director is to effectively carry out the tasks expected of him in his role.

In this study, a conceptual framework and technique were developed in an attempt to increase the level of understanding about relationships between local governmental officials and the implementation of civil defense. The study analyzed the degree of consensus between role definitions of the same position as well as the degree of congruence between role definition and role performance. The sample was small, involving nine counties and 39 interviews in the State of Iowa. Accepting the limitations of such a small sample and the exploratory nature of the research, the study still developed findings having implications to the civil defense program. These included identifying a need for further effort in defining the civil defense roles of local government officials, since role understandings vary considerably. The role of the local civil defense director needs to be correctly communicated to local officials. The clarification of these roles should be more specific as to what is to be performed and is not to be performed. The extent of incorrect perceptions of roles could result in role conflict and inefficiency. Not only do local elected officials and local civil defense directors need to understand their own civil defense roles, they also need to understand the roles of others with responsibility for civil defense.

SUMMARY

The foregoing discussion has outlined some of the more relevant aspects of the history of civil defense and provided an overview of public attitudes toward it. Public opinion and response have been discussed in a general way. Research findings on such topics as the international context, threat perception, program support, salience, perceptions of local programs, perceptions of shelters as a survival resource, response to warning, and the impact of training and education have been summarized. Also reported in summary form is the 1978 National Survey, which probed issues of public attitudes and possible responses to crisis relocation.

This review has covered findings concerning special audiences—information seekers, youth, local governing bodies, community elites, voluntary associations, etc. These subjects were chosen from a large number of possible areas about which there are public attitude data. Some discussion has been directed toward the fact that public attitudes are in some ways a problem in civil preparedness. During periods when civil defense might hope to involve the public in the program, both the low salience and the negative-contingency aspect of the message serve to reduce the effectiveness of these efforts. During periods of crisis, the immediate response tends to divert decision makers from the consideration of policies concerning improved postures of readiness. As a result, government tends to become completely involved in the management of a volatile public concern about the state of community preparedness and the adequacy of survival measures.

The issue of public response has been analyzed in normal crisis expectant, and crisis surge environments—differing attitudinal states which affect the social and psychological feasibility of civil preparedness programs. It was also suggested that the government's strategic policy of massive retaliation and assured destruction may have been a constraining influence on the development of passive defense systems. In European states, where civil preparedness programs have been more successful in creating a protective shelter system, the general strategy of defense revolves around a concept of massive resistance in which civil protection has a vital role. Finally, it is noted that the public foresees a long period of international tension and perceives these tensions as increasing over time.

The 1978-1979 period was characterized by continued discussion and evaluation of the civil preparedness and disaster response programs. In trying to assess the meaning of the issues reported in this summary report, it has been necessary to reach beyond the available data. It is also too early to assess the meaning of the recent policy and organizational changes. Thus, the views expressed below are those of the writer and should be recognized as such.

Based on past history, one might assume that modest levels of improvement in program effectiveness are likely in the near future. While the nature of the problem of nuclear attack precludes good solutions, it still seems reasonable that a better posture of civil defense

readiness will become the goal of government. The development of better linkages between passive and active systems will likely continue in the 1980s. The public and the government will prefer active defense systems over passive systems; however, general changes in the assessed capability of active systems to deter an attack, and concern with arms limitation agreements, should generate greater support for the development of protection systems.

In the process of updating this summary, the writer has also reviewed at least four earlier updating efforts, and has been forced to evaluate his 27 years in the field of national civil preparedness. A review of past studies and evaluations of the program suggests yet another recurrent theme: Statements like "the most important single aspect of the current situation is the outcome of policy considerations" have occurred at regular intervals throughout the program's history. The studies and evaluations have been almost continuous. Excepting a period of about five years in the early 1960s, when the Nation tried to develop a fallout shelter capability at the initial direction of President Kennedy, there has been a steady decline in the resources available to develop protective systems for the American population. During this same period, the requirement—measured in terms of population at risk from destructive weapons—has increased dramatically.

During this period of decline, civil defense programming has often involved the maintenance of a token organization with very limited effectiveness. The lack of effectiveness in pursuing the legislated goals of the system has been so obvious, in fact, that the average performer in the system has discounted its nuclear preparedness goals and mission. Civil preparedness has been viewed too often as an organization in search of an achievable program.

Of course, the public could not be expected to be informed about the relative state of readiness of the civil defense program. They surely understand the need for such programs and assume the government is developing the required capabilities. In fact, a large body of attitude data demonstrates a consistently favorable state of public attitudes. Furthermore, when specific programs have been deployed, these attitude data are confirmed by actual response behavior as demonstrated in the Home Fallout Shelter Survey, plans to share home basement shelter, and response to training. In general, attitude data indicate the public is willing to support almost any program the government might undertake in this area.

The problem of the state of public attitudes, if it exists, seems to be more a matter of the decision makers' assessment of the position of the public. The passive favorable nature of public response seems to be interpreted by some as a rejection of the program. They feel the public should demand program action as evidence of acceptance; however, this would occur only during a period of high threat perception, and only if the public were well informed about the status of the program. The general relaxation of public debate which occurred two years after the Berlin/Cuban crisis undoubtedly resulted in a reduction in perception of an immediate threat. Attitude data over the history of civil defense indicate no basic change in support for civil defense programs.

IMPLICATIONS

The writer, in last reviewing this history in 1971, attributed the program outcomes to a series of decision making accidents. On a relatively few occasions during the last 27 years, the civil defense issue was considered at the top levels of government. The circumstances at those times, and the personal orientations of a few key decision makers, resulted in the neglect of this element of the national defense. While it is too early to determine the full impact on nuclear preparedness of the national decisions of 1979, it should be noted that they did not affect the program's 1980 funding level. Based on past historical development of civil defense programs in the United States, one might assume that the nation will continue to try and develop relatively inexpensive systems. Periodically, changes will be made with the intention of implementing cheap but useful new approaches. But the total level of effort would be expected to remain relatively stable—unless the United States is shocked by a major nuclear war threat. Not answered yet, however, is the question of how best to utilize those severely limited resources.

Another of the factors which has marked civil preparedness efforts in the past 27 years is the continual organizational changes at the Federal, State, and local levels. The recent restructuring into the Federal Emergency Management Agency (FEMA) should result in better organizational alignments among natural, industrial, environmental, and nuclear disaster functions. Such an outcome is not automatic, however. Disaster preparedness for a range of hazards must still deal with the problem of low saliency. Separate, uncoordinated efforts could be doomed to failure, whereas a single, highly coordinated all-hazards preparedness effort is likely to enjoy more public support than the sum of several independent efforts.

The 1980s will undoubtedly see a search for further rationalization of preparedness efforts, which may eventually be forced by events to include a greater emphasis on military-oriented civil defense. As this transformation occurs, it will call for a recasting of civil defense systems in such a way that the nation's preparedness for war-caused disaster will be increased as a by-product of all-hazards planning.

In analyzing the costs and possible benefits of using other community preparedness programs to augment nuclear disaster preparedness, it will be important to consider issues in depth. Gross generalizations—e.g., "preparedness is the same (or is different) for all hazards"—will not suffice. All disasters are somewhat different, but in some ways all are much alike. A disaster plan useful in meeting community needs for a flood would be inadequate, in most respects, as a response to an earthquake or nuclear attack. Yet, the response to any disaster involves the human factors: behavior and the organization of collective efforts.

More appropriate considerations for such analyses would include the acquisition of skills, capabilities, resources, and possible program support and stability. This approach would include consideration of such areas of increased civil defense capability as contingency planning, opportunities for training and public information activities, experience in moving

large numbers of people, and the mobilization and coordination of community resources. Above all, perhaps, an effective and cost-effective approach would reflect thoughtful strategies for integrating preparedness efforts and mobilizing public support.

Contingency Planning

Basically, civil defense is a community effort to plan for unusual contingencies and rare events. Most people are not very good at such planning and do not like it. The more unlikely is the event to occur, the more difficult it is to give sustained attention to it. Contingency planning deals with hypotehtical events which have only a "paper" reality, and requires a good deal of imagination and attention to detail. Unfortunately, such planning is almost always accorded a low priority. The planner gets little or no feedback from others, and consequently receives no short-term rewards. Effective contingency planning also requires skills in coordination and in motivating others in government to assist in the effort.

In order to do a good job of operational planning, civil defense must increase contingency planning skills at all levels of government. By so doing, government can be helped to respond better to emergencies of all kinds. It seems quite obvious that an all-hazards approach to civil defense programs would increase the possibilities for improving contingency planning capabilities in civil defense. This would occur as a straightforward result of more opportunities to practice these planning skills.

Training

An important aspect of contingency planning is the opportunity to exercise or test the plan. This may occur as a result of experiencing a disaster emergency and, thus, learning directly from it. Short of such experience, plans can be tested by simulation or practice in the use of the plan. Simulation exercises can be used to test all aspects of plans and to train people to use them in an emergency. This generally involves a scenario or a description of an unfolding event which occurs over time, and a series of responses to the event which are made by program actors playing the simulation, or game. Both the occurence of a disaster and a simulation exercise create an experience base for response to future emergencies. Generally, people like to participate in well-designed simulation exercises. An all-hazards approach to civil defense planning obviously increases the opportunity to test contingency plans and to teach others how to function under emergency crisis situations.

Public Information

Another central aspect of all civil defense efforts is the dissemination of information. This dictates a continuing relationship with a variety of audiences. Civil defense has a continuing responsibility for "getting the information out." The public as a whole should know what to do and where to go in the event of an attack. Additionally, particular audiences need to be involved in each specific civil defense program or function. This involves training programs for specialists, such as radiological monitors and shelter managers, and general public training programs, such as personal and family survival courses. In this respect, the civil defense structure might be viewed

as a distribution system for a variety of emergency response information. As such, it must know its audiences, and it must have access to and use of the best channels to these audiences. The value of incorporating all-hazard response information with nuclear response information has been amply demonstrated in the experience of distributing Booklet H-14, *In Time of Emergency*. The content of this document, which deals with public response to various emergencies, continues to generate its own readership and distribution requirements. The use of the civil defense information dissemination system for a range of hazards would obviously strengthen the civil defense capability to maintain an improved state of readiness, and would benefit the programs dealing with each hazard.

Relocation of Population

Civil defense must be prepared to manage the movement of large numbers of people during emergency operations. A range of peacetime emergency management activities involve the movement capability. These activities include: evacuation of natural disaster victims, relocation of populations threatened by hazardous materials or similar industrial hazards, and contingency planning for communities near nuclear power plants or depositories of waste materials, to name only a few. These efforts often afford opportunities to gain experience and know-how that is useful in civil defense—and particularly in the Crisis Relocation Planning (CRP) effort.

Mobilization of Community Resources

The civil preparedness program can make a useful contribution to government at all levels by virtue of its knowledge and capabilities in the area of mobilizing and coordinating community resources. Civil preparedness must develop a local governmental capability to bring together both private and public organizations into emergency systems which can function during periods of great stress. Basically, the civil preparedness emergency response systems involve social action programs which will bring together material, human, and organizational resources—and coordinate their use during periods of crisis or disaster. The "coordinator" is emerging as a distinct role in government, and civil preparedness staffs must develop coordination skills to achieve success in their task. The civil preparedness Emergency Operating Center is a useful symbol of the requirements for coordinated community action in an emergency. In several communities, the utility of the control center in facilitating peacetime governmental coordination has been demonstrated. The center provides a setting in which community leaders interact with each other on problems and approaches. More generally, the control center might be used to effect the increased interagency coordination which is recognized as a current need of government.

Experience in coordinating community resources for other than nuclear disaster hazards not only provides an increased base for such coordination but probably generates what might be called "reciprocal obligations." The lcoal civil defense director who has helped others carry out their emergency role can usually call on them for increased voluntary cooperation with nuclear preparedness social action programs.

Strategies For Achieving
Comprehensive Preparedness

All preparedness activity faces a common barrier, which is essentially psychological in nature. Put simply people are loathe to support a thoroughgoing approach to preparedness until a crisis or disaster is perceived to be imminent.

This altogether "natural" tendency has forbidding implications for preparedness planners and organizations. Populations have become more concentrated. Potential threats have become more technical and awesome. Emergency management more often involves a sophisticated, planned, and "prepared" response. Lead times available to managers may preclude an effective makeshift response, no matter how adroit or committed the preparedness official.

International crises and nuclear diplomacy pose the problem of inadequate planning and lead times in the most urgent sense. Negotiations around a nuclear war issue would undoubtedly take account of the protection available to civilian populations. Adequate responses to nuclear threats, however, would involve extensive sheltering, evacuation, mobilization, and public information activities of a complex nature, requiring substantial lead times and elaborate plans. Yet, such preparedness activities are scarcely conceivable to the bulk of the population in normal times.

Given the constraints imposed by heavy crisis period demands and disproportionately low levels of support in normal periods, how can FEMA best utilize its severely limited resources to prepare for a range of disasters? The implications of the evidence reviewed herein would suggest two general programmatic thrusts:

First: preparedness programs should reflect and be geared to the changing levels of public awareness and support that accompany the development of crisis-expectant and crisis conditions.

Second: preparedness programs should *truly* utilize the potential synergism implicit in the FEMA organization, systematically developing a comprehensive disaster response mechanism by building on program elements that are used in responses to a variety of natural and man-caused disasters.

Changing attitudes and perceptions. Emergency management programming could build on the established concept that public support will reflect changing levels of consciousness of hazards. The widespread perception of an oncoming disaster prompts enormous amounts of activity, often including substantial shifts in the organization of people and resources. The more complex the activity required to respond, and the more complex the required organizational shifts, the more important it is to enter the event with formalized plans and trained emergency managers or coordinators. Even for the major non-military and non-nuclear hazards, effective preparedness will always involve the planned use of relatively limited resources to prepare for a future planned use of relatively extensive resources.

Nowhere is this principle more apparent than in the programming of public information and training efforts. Instructional material and messages must, essentially, be designed in one environment for rapid, effective use and dissemination in another. Consciously or otherwise, preparedness planners are often attempting to anticipate the changing levels of public awareness which will affect the reception of messages and information as a disaster approaches. The criticality of anticipating correctly becomes still more apparent when one remembers that—in most emergency situations—apt behaviors by an informed public can effectively substitute for many of the actions otherwise required from formal disaster-response organizations.

Contingency planning for nuclear war provides the extreme instance of the changing perceptions phenomenon. The precautionary actions potentially required in some future crisis—essentially, the evacuation and sheltering of a large percentage of the American public—are of a totally different order of magnitude than anything else envisioned in preparedness operations. In normal times, however, the threat is scarcely comprehensible or "thinkable" to the public who would react to that threat in a very different future environment.

The 1978 Survey data suggest an upswing in public awareness of the nuclear threat, indicating a level of perceived threat similar to that recorded in the mid-1960s. While domestic problems were clearly of great concern to respondents, people indicated they worry more about the world situation. Should the international problems of energy supply and costs grow worse, leading to domestic economic concerns, one might expect the public to perceive an increasingly hostile international environment over the coming years.

The logic of "deterrence" concepts could unfold toward a similar outcome. If international parity in destructive weapons is perceived to generate stability—and that concept has been widely publized—then shifts in that balance could generate fears of instability. The actions of other nations, whether or not they were pursued with this factor in mind, could easily be assumed to pose more serious possibilities of nuclear confrontation or attack.

For these and other reasons, the 1980s could witness a sharply greater public concern with international threats—real and perceived. Such fears would focus attention on civil preparedness systems, leading to demands for improved postures and greater "security." An appropriate, knowledgeable, and timely response would presuppose prior planning to guide this complex activity—particularly, if events should allow only brief lead times.

Multiple-hazards approaches to preparedness. The pros and cons of integrating attack preparedness and other emergency management functions have long been recognized. A 1972 report delineated the logics and rationales of the two general positions: Favorable factors include the cost-effectiveness of an integrated approach (which applies to a diversity of natural hazards programs as well), enhanced organizational base, better exploitation of appropriately skilled people, and greater opportunities to enlist, train, and organize people to operate emergency systems. Unfavorable factors include the negative images of military preparedness in

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some quarters, the low peacetime *salience of civil* defense messages in many communities, bureaucratic and professional parochialism, and a tendency for many of the system's own local directors to pay only lip service to the attack-preparedness mission. The more purely logical aspects of these positions—then, as now—clearly weighed in favor of a multiple-hazards preparedness doctrine.[24]

The advent of FEMA clearly signals a renewed desire to capitalize on the potential effectiveness and cost-effectiveness of a comprehensive approach to preparedness. To achieve this objective will of course require the precise definition and functional integration of the numerous preparedness tasks associated with a variety of hazards. Ideally, such integration would also reflect the appropriate staging of preparedness investments in relation to probable hazards. That is, a truly comprehensive approach would assess, then reflect, the relative benefits and costs of mitigation, response, and recovery actions. This type of analysis is within the state of the art, but has often proved difficult to achieve in the policy realm and the everyday programming of preparedness activities.

The recent civil defense research on attitude formation, communication in its broadest sense, public education, and social action variables can inform the FEMA search for comprehensive preparedness policies and doctrines. The concept of normal, crisis-expectant and surge stages, for example, was developed to guide programming through the dilemmas posed by public quiescence followed by surging demands for information and complex action. Though still somewhat exploratory, the concept exemplifies how social science and behavioral knowledge can help define the fundamental issues and potential resolutions in perhaps the most demanding subarea within preparedness planning. This concept, and many others emerging from the research program, can be used to suggest and trigger fresh approaches to programming across a broad range of preparedness concerns.

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The body of continuing knowledge and research described here has been focally concerned with the interaction between emergency management programs and their intended audiences during both emergency and nonemergency periods. The findings and implications strongly attest to the need for integrating well-informed strategies of public education and information in comprehensive preparedness plans and programs.

Given the limited tangible assets normally accorded to preparedness programs, and comparing these to the scope of action periodically required from them, much of their potential effectiveness lies in their capacity to stimulate intelligent individual and organizational behavior on a sometimes massive scale. The capacity, thus, to mobilize emergency-response activity must be based on a clear understanding of the social processes and mechanisms which must operate to produce effective mitigation, response, and recovery activity.

The author invites—indeed requests—your comments on and reactions to this summary, including the analyses and implications presented above. This effort was undertaken both to update an earlier document and to stimulate additional discussion of the principles and factors which should be reflected in the development of thoughtful, effective approaches at this stage in the evolution of preparedness policy and organization.

FOOTNOTES

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